

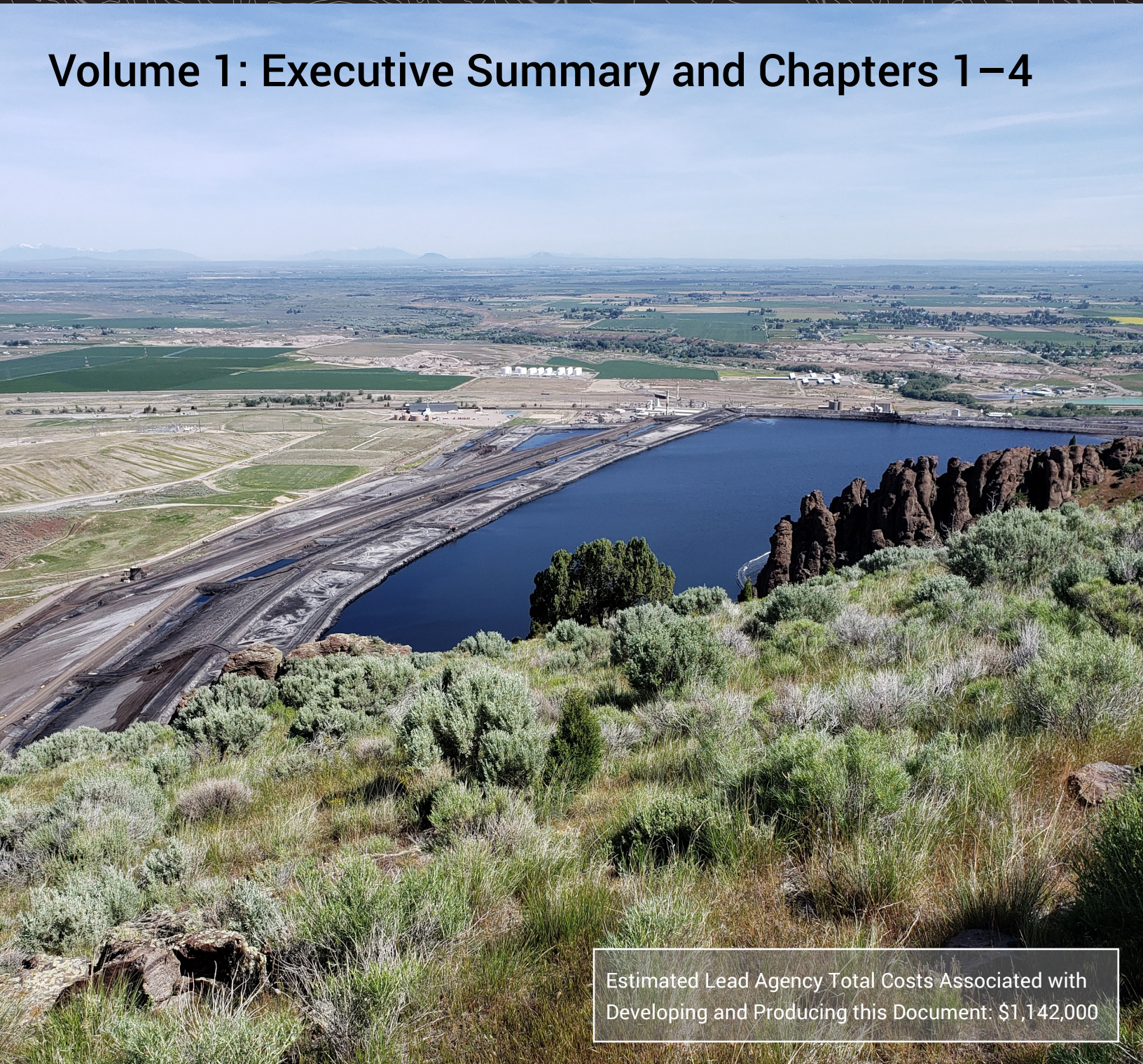


U.S. Department of the Interior
Bureau of Land Management

Blackrock Land Exchange Final Environmental Impact Statement

Pocatello Field Office

Volume 1: Executive Summary and Chapters 1–4



Estimated Lead Agency Total Costs Associated with
Developing and Producing this Document: \$1,142,000

Pocatello Field Office

Blackrock Land Exchange Final Environmental Impact Statement

DOI-BLM-ID-I020-2019-0008-EIS

Volume 1: Executive Summary and Chapters 1–4

**U.S. Department of the Interior
Bureau of Land Management**

May 2020

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BLM MISSION

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

DOI-BLM-ID-I020-2019-0008-EIS



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Idaho Falls District Office
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In Reply Refer To:
2200 (LLIDI02000)
IDI-38518 FD/PT
DOI-BLM-ID-I020-2019-0008-EIS

Dear Reader:

Enclosed for your review is the Final Environmental Impact Statement (EIS) for the Blackrock Land Exchange. The Bureau of Land Management (BLM) has prepared the Final EIS to analyze and disclose the potential effects of the proposed Blackrock Land Exchange pursuant to Section 206(a) of the Federal Land Policy and Management Act of 1976 (FLPMA), as amended, the National Environmental Policy Act of 1969, as amended, and the Council on Environmental Quality regulations, as well as other applicable Federal laws and regulations. The Final EIS was prepared in cooperation with the Idaho Department of Environmental Quality (IDEQ), Idaho Governor's Office of Energy and Mineral Resources, United States Environmental Protection Agency (EPA), and Bureau of Indian Affairs.

The proposed action consists of the J.R. Simplot Company (Simplot) proposal to acquire 719 acres of Federal land managed by the BLM in exchange for 667 acres of non-Federal land. The Federal lands are adjacent to Simplot's Don Plant in Power and Bannock Counties, Idaho. The non-Federal lands are located in the Blackrock and Caddy Canyon areas in Bannock County approximately 5 miles east-southeast of Pocatello, Idaho. The Final EIS evaluates the Proposed Action and two action alternatives (Alternatives A and B), in addition to a No Action Alternative.

The BLM's purpose is to evaluate the land exchange proposal. If approved, the proposal would improve resource management in an area containing crucial mule deer winter range habitat and secure permanent public access within a popular recreation area. The BLM's need is to respond to the proposal pursuant to FLPMA, as amended. Simplot's purpose for the proposed land exchange is to implement legally enforceable controls as directed by the EPA and IDEQ. To meet fluoride reduction requirements of the IDEQ's 2016 Consent Order, Simplot has proposed construction of cooling ponds adjacent to the Don Plant, which would require the acquisition of adjacent Federal lands. Additionally, this acquisition would allow Simplot to maximize the operational life of its ongoing phosphate processing operations at the Don Plant by expanding gypsum stacks onto adjacent land.

A Notice of Intent (NOI) to prepare an EIS was posted in the *Federal Register* on May 20, 2019, initiating a 45-day public scoping period. The BLM used the public scoping comments to identify data sources, inform the development of a range of reasonable alternatives, define the scope of analysis for the EIS, identify resource issues for detailed analysis, and solicit other information to be used in the development of the EIS. A Notice of Availability (NOA) was published in the *Federal Register* on December 20, 2019, initiating a 45-day public comment period on the Draft EIS. After public review of the Draft EIS, substantive comments were considered and incorporated into the Final EIS.

The BLM has selected Alternative B (Avoiding the West Canyon) as the Preferred Alternative. The BLM developed Alternative B in response to comments received during scoping to adjust the boundary of the Federal lands to avoid cultural and tribal resources on Howard Mountain. It also provides the greatest net benefit to the public based on economic and technical considerations, agency statutory missions, and considerations of national policy. Alternative B will also allow for a net gain of public lands and will make additional lands available for tribal uses.

The NOA for the Final EIS will be published in the Federal Register on May 22, 2020. The Final EIS is available on BLM's ePlanning webpage at: <https://go.usa.gov/xEUuc>.

Following a 60-day Final EIS availability period, the BLM will issue the Record of Decision (ROD). BLM's ROD will be announced via news release and letter. The ROD will be available for viewing on BLM's ePlanning webpage listed above.

Thank you for your interest in your public lands. For more information contact Bryce Anderson, Project Manager at (208) 478-6353 or bdanderson@blm.gov or visit the Blackrock Land Exchange BLM ePlanning site above.

Sincerely,



Mary D'Aversa
District Manager

BLACKROCK LAND EXCHANGE FINAL ENVIRONMENTAL IMPACT STATEMENT

Lead Agency:	United States Department of the Interior Bureau of Land Management Idaho Falls District Pocatello Field Office
Cooperating Agencies:	Idaho Department of Environmental Quality Idaho Governor's Office of Energy and Mineral Resources U.S. Environmental Protection Agency Bureau of Indian Affairs
Project Location	Power and Bannock Counties, Idaho
Date Final EIS Filed with EPA	May 15, 2020
Direct Correspondence to	Project Manager, Bryce Anderson Bureau of Land Management Pocatello Field Office 4350 S. Cliffs Dr. Pocatello, ID 83204 Phone: (208) 478-6353
Responsible Official for EIS	Mary D'Aversa BLM Idaho Falls District Manager
EIS Number	DOI-BLM-ID-I020-2019-0008-EIS

Abstract: This Final Environmental Impact Statement (EIS) describes and analyzes four alternatives for a proposed land exchange in which the J.R. Simplot Company (Simplot) would acquire Federal land managed by the Bureau of Land Management (BLM) adjacent to Simplot's Don Plant manufacturing site in Power and Bannock Counties, Idaho, in exchange for non-Federal land owned by Simplot in the Blackrock and Caddy Canyon areas in Bannock County approximately 5 miles southeast of Pocatello, Idaho. The proposed land exchange would enable the BLM to improve resource management in an area containing crucial mule deer winter range and secure additional permanent public access within a popular recreation area. Simplot has indicated its intent to use the acquired Federal lands for construction of cooling ponds to implement legally enforceable controls and to maximize the operational life of its ongoing phosphate processing operations at the Don Plant by expanding gypsum stacks onto adjacent land.

Changes made between the Draft EIS and the Final EIS include, but are not limited to, further refinement of reasonably foreseeable actions under Alternative B, incorporation of new information and measures resulting from ongoing consultation with the Shoshone-Bannock Tribes, and various revisions and clarifications of the analysis contained in the Draft EIS based on public comments. These changes are indicated by gray shading in the Final EIS. The Final EIS also includes new Appendix I, which contains a summary of comments received during the public review period for the Draft EIS and the BLM's responses to those comments.

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ACRONYMS AND ABBREVIATIONS

µg/m ³	micrograms per cubic meter
AUM	animal unit month
BCC	Birds of Conservation Concern
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMF	Eastern Michaud Flats
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act of 1976
FWS	U.S. Fish and Wildlife Service
GIS	geographic information system
ID	interdisciplinary
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IMPLAN	IMpact Analysis for PLANning
MCL	Maximum Contaminant Level
mg/L	milligram per liter
MOA	Memorandum of Agreement
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OEMR	Idaho Governor's Office of Energy and Mineral Resources
pCi/L	picocuries per liter
PFYC	potential fossil yield classification
PM ₁₀	particulate matter 10 microns or less in diameter
PM _{2.5}	particulate matter 2.5 microns or less in diameter
Pocatello RMP	Record of Decision and Pocatello Field Office Approved Resource Management Plan
RMP	Resource Management Plan
RMZ	Recreation Management Zone
SESA	socioeconomic study area
SHPO	State Historic Preservation Office
Simplot	J.R. Simplot Company
SO ₂	sulfur dioxide
SRMA	Special Recreation Management Area
SWPPP	stormwater pollution prevention plan

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tpy	tons per year
U.S.C.	United States Code
USCB	U.S. Census Bureau
VOC	volatile organic compound
VRM	Visual Resource Management

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EXECUTIVE SUMMARY

This Executive Summary provides a synopsis of the Blackrock Land Exchange **Final** Environmental Impact Statement (EIS). However, this synopsis is not a substitute for review of the complete **Final** EIS.

Background

The Bureau of Land Management (BLM) Pocatello Field Office is the lead agency preparing an EIS for the proposed Blackrock Land Exchange in Power and Bannock Counties, Idaho. The intent of the National Environmental Policy Act (NEPA) process is to analyze and disclose potential environmental consequences of the Proposed Action—the Blackrock Land Exchange—and reasonable alternatives, enabling public officials to make a well-informed decision.

In 1994, the J.R. Simplot Company (Simplot) submitted a land exchange proposal to the BLM Pocatello Field Office to acquire public lands adjacent to the Don Plant. The Don Plant processes phosphate ore to manufacture phosphate fertilizer and feed phosphates. Simplot indicated its intent to use the acquired Federal lands as a potential future waste disposal area for the gypsum by-product from fertilizer manufacture known as phosphogypsum. The BLM initially began preparing an Environmental Assessment to analyze impacts of the proposed land exchange in 1996. The land exchange proposal was subsequently put on hold until Simplot renewed talks with the Pocatello Field Office in 2002. Simplot identified additional Federal and non-Federal lands for exchange, ultimately proposing to acquire 719 acres of Federal land managed by the BLM in exchange for 667 acres of non-Federal land owned by Simplot—the same lands being evaluated under the current Proposed Action.

The BLM subsequently prepared an Environmental Assessment to analyze the proposed land exchange (BLM 2007a) and issued a Decision Record and Finding of No Significant Impact approving the land exchange in December 2007 (BLM 2007b). The Shoshone-Bannock Tribes challenged the BLM's decision in the U.S. District Court for the District of Idaho, alleging that the BLM was obligated to prepare an EIS under the requirements of NEPA. In May 2011, the Court granted the Shoshone-Bannock Tribes' motion and remanded the Decision Record and Finding of No Significant Impact to the BLM, ordering the agency to prepare an EIS (*Shoshone-Bannock Tribes of Fort Hall Reservation v. United States Department of the Interior et al.*, 2011).

Purpose and Need

The BLM's purpose is to evaluate the land exchange proposal. If approved, the proposal would improve resource management in an area containing crucial mule deer winter range and secure permanent public access within a popular recreation area in accordance with the *Record of Decision and Pocatello Field Office Approved Resource Management Plan* (Pocatello RMP) (BLM 2012). The BLM's need is to respond to the proposal pursuant to the Federal Land Policy and Management Act of 1976 (FLPMA), as amended.

Alternatives

Proposed Action

The Proposed Action is a land exchange—referred to as the Blackrock Land Exchange—wherein Simplot proposes to acquire 719 acres of Federal land managed by the BLM adjacent to Simplot's Don Plant manufacturing site in Power and Bannock Counties, Idaho (i.e., Federal lands) in exchange for 667 acres

of non-Federal land owned by Simplot in the Blackrock and Caddy Canyon areas in Bannock County approximately 5 miles southeast of Pocatello, Idaho (i.e., non-Federal lands). Appendix C, Map 1, depicts the location of these lands.

Reasonably Foreseeable Actions on Lands Proposed for Exchange under the Proposed Action

Simplot has indicated its intent to use the acquired Federal lands for construction of cooling ponds to implement legally enforceable controls described in Section 1.2.2 (*Site Information and Environmental Requirements*) and to maximize the operational life of its ongoing phosphate processing operations at the Don Plant by expanding gypsum stacks onto adjacent land (Appendix C, Map 6). As is the case with any transfer of land out of Federal ownership, the BLM must assume that the transferred lands will be managed in conformance with all applicable statutes, regulations, and rules governing the actions and/or inactions of private, local, State, tribal, and Federal interests that acquire jurisdiction in some capacity over said lands. Consistent with the memorandum decision of the U.S. District Court for the District of Idaho (*Shoshone-Bannock Tribes of Fort Hall Reservation v. United States Department of the Interior et al.*, 2011), this EIS fully considers potential indirect and cumulative effects of the intended uses of the acquired Federal lands based on conceptual site plans developed by Simplot (HDR, Inc. 2018). Refer to Section 2.1.3 (*Reasonably Foreseeable Actions and Intended Uses of Lands Proposed for Exchange*) for a detailed description of the intended future uses of the acquired Federal and non-Federal lands.

Surface and subsurface mineral rights for both the Federal and non-Federal lands would be transferred in the proposed exchange. Water rights held by the BLM within the Federal lands would be transferred to Simplot. There would be no transfer of water rights on the non-Federal lands. All existing right-of-way and other interests in the Federal and non-Federal lands would be inherited by the new landowner.

Approval of this exchange would result in the modification of the Trail Creek cattle allotment on the acquired Federal lands. Robert Swanson for Michaud Creek Ranches, the affected permittee, has been notified of the exchange and signed a waiver regarding the 2-year grazing notification required by regulation at 43 Code of Federal Regulations 4110.4-2(b). Therefore, the acquired Federal lands would not be subject to any grazing privileges once exchanged.

Alternative A – Increased Non-Federal Land Acreage (including Voluntary Mitigation and Donation Parcels)

Alternative A was developed based on comments received during scoping to consider a land exchange that results in a net gain of public lands and makes additional lands available for tribal uses. Alternative A includes the same area of Federal and non-Federal lands as the Proposed Action, with the addition of voluntary mitigation Parcel A offered by Simplot. For Alternative A, the acreage of Federal lands included in the land exchange would be the same as under the Proposed Action (719 acres); however, the acreage of non-Federal lands that the BLM would acquire in the land exchange would increase to 827 acres, representing a net gain of approximately 108 acres of non-Federal lands that the BLM would acquire. The lands proposed for exchange under Alternative A are shown in Appendix C, Map 2, and in greater detail in Maps 3, 4, and 5.

The additional acreage of non-Federal lands would include 160 acres of Simplot-owned land in the Blackrock Canyon area that would be acquired by the BLM, hereafter referred to as voluntary mitigation Parcel A (Appendix C, Map 4). Inclusion of voluntary mitigation Parcel A as part of the land exchange would:

- Transfer an additional 160 acres of non-Federal lands into BLM administration (voluntary mitigation Parcel A), resulting in a total of 827 acres of land that the BLM would acquire in the land exchange, representing a net gain of 108 acres.
- Increase the acreage of non-Federal lands that the BLM would acquire and manage consistent with adjacent lands as described in the Pocatello RMP (BLM 2012), including managing an additional 160 acres as part of the Pocatello Special Recreation Management Area (SRMA).
- Improve existing public access and provide additional opportunities for public access to the Chinese Peak/Blackrock Trail system, and provide legal access for designated routes 0319 and T0354 where the routes cross voluntary mitigation Parcel A. Access for non-motorized and non-mechanized recreational activities would be available from the routes where they cross voluntary mitigation Parcel A.
- Transfer 26 acres of non-Federal lands into BLM administration within the Blackrock Canyon big game winter range as identified by the Pocatello RMP (BLM 2012).

Simplot has also offered for donation approximately 950 acres of private property within the Fort Hall Reservation boundary—hereafter referred to as voluntary donation Parcel B (Appendix C, Map 5)—to the Secretary of Interior Bureau of Indian Affairs (BIA) for the benefit of the Shoshone-Bannock Tribes or to the Shoshone-Bannock Tribes directly, provided the land exchange is approved and any administrative or judicial appeals have been resolved.¹ If accepted, conveyance of voluntary donation Parcel B would consolidate land ownership on the Fort Hall Reservation and make additional lands available to tribal uses. The 950 acres of land that would be offered for donation include:

- Approximately 200 acres of irrigated agricultural lands that could be incorporated into the tribal Agricultural Resource Management program.
- Approximately 750 acres of improved rangeland within the Fort Hall Reservation, which may provide areas for livestock grazing, access to riparian areas along certain segments of Michaud Creek, and other uses.

Reasonably Foreseeable Actions on Lands Proposed for Exchange under Alternative A

Reasonably foreseeable actions and intended uses of lands included in the exchange would generally be the same as under the Proposed Action (Appendix C, Map 6); however, the additional acreage of non-Federal lands would be administered and used as summarized in the description of Alternative A above.

Alternative B – Avoiding the West Canyon (Preferred Alternative)

Alternative B is the BLM's preferred alternative. It was developed based on comments received during scoping to adjust the boundary of the Federal lands to avoid cultural and tribal resources in the west canyon area on the north side of Howard Mountain. Like Alternative A, Alternative B would result in a net gain of public lands and make additional lands available to tribal uses. Alternative B includes the same area of non-Federal lands described under Alternative A, which includes voluntary mitigation Parcel A and voluntary donation Parcel B; however, the Federal lands that would be acquired by Simplot were reconfigured to eliminate the west canyon area from the land exchange (Appendix C, Map 3). As voluntary mitigation for conveyance of National Register of Historic Places (NRHP)-eligible Site 10PR979

¹ The BLM's action to approve the land exchange is not contingent upon the conveyance of voluntary donation Parcel B. This is because this donation would not come to BLM, but would instead go to another entity.

(SB-02-HL) out of Federal administration under Alternative B, Simplot proposes to contribute \$25,000 to the Shoshone-Bannock Tribes' Language Program.

For Alternative B, the acreage of Federal lands included in the land exchange would be 711 acres. The acreage of Federal lands included in the land exchange would be approximately 8 fewer acres than for the Proposed Action and Alternative A. The lands proposed for exchange under Alternative B are shown in Appendix C, Map 2, and in greater detail in Maps 3, 4, and 5.

Inclusion of voluntary mitigation Parcel A and voluntary donation Parcel B would have the same results on non-Federal lands included in the exchange and their administrative entities as identified under Alternative A. Reconfiguration of the Federal lands proposed for exchange in Alternative B would:

- Result in BLM retention of 368 acres of Federal lands in the west canyon area that the BLM would continue to manage in accordance with the Pocatello RMP (BLM 2012), including identified cultural and tribal resources.
- Reduce the acreage of Federal lands that would be transferred to Simplot in the west canyon area, thereby eliminating the area of land that Simplot would acquire for expansion of the gypsum stack in the west canyon under the Proposed Action.
- Result in Simplot's acquisition of 358 acres of Federal lands, not included in the Proposed Action or Alternative A, to the south and east of the Don Plant for construction of the cooling ponds and gypsum stacks. The different configuration of gypsum stacks would increase the total estimated surface disturbance of the reasonably foreseeable actions compared to the Proposed Action and Alternative A. Table 2-7 summarizes the estimated new surface disturbance from Simplot's reasonably foreseeable actions on the Federal lands and adjacent Simplot lands based on conceptual facility designs for Alternative B.

Reasonably Foreseeable Actions on the Lands Proposed for Exchange under Alternative B

For Alternative B, the types of reasonably foreseeable actions and intended uses of lands included in the exchange would be the same as under the Proposed Action and Alternative A, including cooling ponds, expanded gypsum stacks, and associated infrastructure. However, the boundary of the Federal lands included in the exchange would be modified to avoid the west canyon area (Appendix C, Map 3). As a result, the location and extent of the gypsum stacks would be modified based on the reconfigured Federal land exchange area (Appendix C, Map 7). As depicted in Appendix C, Map 7, Simplot has provided preliminary conceptual locations of the gypsum stacks and cooling ponds for Alternative B based on current information.

No Action Alternative

Under the No Action Alternative, the Blackrock Land Exchange would not occur. Current ownership and existing uses of Federal and non-Federal lands would persist for the reasonably foreseeable future. Simplot would not construct the cooling ponds and the cooling towers would remain. Simplot would evaluate whether another feasible (both technically and economically) action could be taken to reduce fluoride emissions to comply with the Idaho Department of Environmental Quality's (IDEQ's) 2016 Consent Order (IDEQ 2016).

Additionally, under the No Action Alternative, the Federal lands would be unavailable for expansion of Simplot's gypsum disposal facilities. Simplot has indicated that failure to obtain the Federal lands for expansion of the gypsum stacks would require the company to reduce production rates and/or cease production at the Don Plant earlier than described under the Proposed Action. If the land exchange

were not approved, Simplot would continue to evaluate other fluoride reduction and waste disposal options to enable continued operation of the Don Plant; however, no feasible alternatives have been identified at this time.

Based on recent gypsum production rates, Keller Associates projects that the lined upper compartment (Phases 2, 3, 4, and 5) of the existing gypsum stack would reach design capacity by 2031, with the top of the gypsum stack reaching an elevation of 5,005 feet above mean sea level if limited to Simplot's present Don Plant property (Keller Associates 2017). The lower compartments (Phases 1 and 6) would still have capacity at this time; however, additional compartments to distribute and manage gypsum slurry and process water will be needed to utilize this space. In order to maintain uninterrupted operation of the facility, the gypsum stack would have to be expanded in advance of the target date when the upper compartment reaches terminal elevation.

Prior to the potential cessation or modification of Don Plant operations described above, the Don Plant would continue to operate in a similar manner to the current condition. There are no anticipated changes to the workforce, vehicle access and traffic, utilities, or water use in the near term.

Environmental Impacts

The environmental effects of all proposed alternatives were evaluated in Chapter 3 of this Final EIS. Table ES-1 summarizes potential environmental impacts for the proposed alternatives.

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Table ES-1. Summary Comparison of Environmental Effects of the Alternatives Carried Forward for Detailed Analysis

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Air Quality and Climate Change	<p>Direct/Indirect Effects: No effects on air quality or climate change.</p> <p>Cumulative Effects: Air pollutant emissions from operation of the Don Plant would continue at approximately the same levels as with current operations. Failure to obtain the Federal lands for expansion of the gypsum stacks would require Simplot to eventually reduce production rates at the Don Plant, which would result in reduced air pollutant emissions. If Simplot is unable to develop a feasible alternative strategy for gypsum disposal, the existing gypsum stack is projected to reach design capacity by 2031. Closure of the Don Plant would result in cessation of all point sources associated with plant operations.</p>	<p>Direct/Indirect Effects: No effects on air quality or climate change.</p> <p>Cumulative Effects: Operation of the gypsum stack expansions and the cooling ponds would result in a net increase in operational power consumption at the Don Plant by approximately 40,000 megawatt-hours per year, an increase of greenhouse gas emissions of approximately 12,000 metric tons per year of carbon dioxide equivalent. This is an increase of slightly more than 10 percent over current greenhouse gas emissions levels associated with the Don Plant. Construction activities associated with the development of the cooling ponds and gypsum stack expansions would result in temporary emissions of criteria pollutants and greenhouse gases. These emissions are not anticipated to result in exceedance of the National Ambient Air Quality Standards.</p>	<p>Direct/Indirect Effects: No effects on air quality or climate change.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: No effects on air quality or climate change.</p> <p>Cumulative Effects: Effects on air quality and climate change would generally be the same as the those of Proposed Action, except the location of the gypsum stack expansions and associated releases of fluoride and particulate matter emissions would be situated farther east than under the Proposed Action. Because the gypsum stacks would be located closer to residences east of the Don Plant, Alternative B could result in slightly higher ambient concentrations of fluoride and particulate matter, as well as higher fluoride in forage concentrations, closer to residences. Other cumulative effects on air quality and climate change would be the same as described for the Proposed Action.</p>
Cultural Resources	<p>Direct/Indirect Effects: No effects on cultural resources.</p> <p>Cumulative Effects: No cumulative impacts are expected.</p>	<p>Direct/Indirect Effects: The proposed land exchange would constitute an adverse effect on NRHP-eligible Sites 10PR666 and 10PR979 (SB-02-HL), as these sites would be transferred out of Federal administration. A small segment of a much larger linear site, 10BK274, is part of the Union Pacific right-of-way. It is maintained, upgraded to modern standards, and still in use. Although this segment would be transferred out of Federal administration, the character of the site is not anticipated to change and there would be no effect on this site. No impacts are expected on cultural resources on the non-Federal lands as a result of the Proposed Action.</p> <p>Cumulative Effects: Reasonably foreseeable construction of cooling ponds and gypsum stacks on the Federal lands may damage or result in permanent loss of cultural resources. NRHP-eligible Site 10PR666 and NRHP-ineligible Sites 10BK212, 10BK416 (SB-01-CLC), and 10PR978 (SB-02-CLC) are wholly or partially within the footprints of planned facilities, and are therefore anticipated to be damaged or destroyed during construction of the facilities. Site 10BK274 occurs within right-of-way IDI-001449, which is utilized by the Union Pacific Railroad. The character of the site is not anticipated to change in the reasonably foreseeable future. NRHP-eligible Sites 10BK274 and 10PR979 (SB-02-HL) and NRHP-ineligible Site 10PR93 are not within the footprints of the planned facilities, but would not be subject to protection under Federal laws and regulations, and could be damaged or destroyed due to construction or operational activities. Because NRHP-eligible sites would be inventoried, recorded, and mitigated under the requirements of the National Historic Preservation Act prior to their transfer out of Federal ownership, the cumulative effect resulting from the eventual physical loss of the cultural sites would be minimized.</p> <p>There are no NRHP-eligible sites on the non-Federal lands and there are no direct or indirect effects anticipated on cultural resources on the non-Federal lands as a result of the land exchange.</p>	<p>Direct/Indirect Effects: Direct and indirect effects on cultural resources on the Federal lands would be the same as described for the Proposed Action.</p> <p>On non-Federal lands, no cultural resources were identified on voluntary mitigation Parcel A. Therefore, no effects on cultural resources within voluntary mitigation Parcel A are expected under Alternative A. The 2019 cultural resource inventory of the voluntary donation Parcel B area identified one isolated find and four cultural resource sites, but none of these sites are recommended as eligible for listing on the NRHP and no additional research or preservation is required. Therefore, no impacts are expected on cultural resources if voluntary donation Parcel B is conveyed to the BIA or the Shoshone-Bannock Tribes.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Due to the reconfigured Federal lands boundary, the proposed land exchanged would not adversely affect NRHP-eligible Site 10PR666 because it would be retained in Federal ownership. Similar to the Proposed Action, site 10BK274 would be transferred out of Federal administration, but the character of the site is not anticipated to change and there would be no effect on this site. In addition, newly recorded site 10PR979 (SB-02-HL) is located within the Federal lands under Alternative B and the 2019 cultural resource inventory recommended this site as NRHP-eligible under Criterion D. Transfer of NRHP-eligible Site 10PR979 (SB-02-HL) out of Federal administration would constitute an adverse effect.</p> <p>Cumulative Effects NRHP-eligible Site 10PR666, NRHP-ineligible Sites 10PR93 and 10PR978 (SB-02-CLC), and the cave dwelling in the Wind Canyon cliffs area that is culturally significant to the Shoshone-Bannock Tribes would be retained in Federal ownership and, therefore, would not be damaged or destroyed from construction of the reasonably foreseeable actions. Newly recorded site 10PR979 (SB-02-HL) is located within the Federal lands under Alternative B and the 2019 cultural resource inventory recommended this site as NRHP-eligible under Criterion D; however, the reconfigured layout of the cooling ponds and gypsum stack expansions under Alternative B would avoid NRHP-eligible Site 10PR979 (SB-02-HL). This NRHP-eligible site would be inventoried, recorded, and mitigated in accordance with a Memorandum of Agreements to be prepared under the National Historic Preservation Act requirements and/or protected through a deed restriction prior to transfer out of Federal ownership.</p> <p>Cumulative effects on cultural resources on the non-Federal lands would be the same as described for the Proposed Action and Alternative A.</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Tribal Treaty Rights, Trust Responsibilities, and Tribal Resources	<p>Direct/Indirect Effects: The Federal lands would remain available for the exercise of off-reservation treaty rights by the Shoshone-Bannock Tribes. The non-Federal lands would remain under private ownership and unavailable for off-reservation treaty rights.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on cultural resources and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The proposed land exchange would result in a net loss of 52 acres of land and a change in the location of lands that would be available to the Shoshone-Bannock Tribes to exercise their off-reservation treaty rights. Transfer of NRHP-eligible Sites 10PR666 and 10PR979 (SB-02-HL), as well as other NRHP-ineligible sites identified above for Cultural Resources, out of Federal ownership would constitute an adverse effect.</p> <p>Cumulative Effects: Past, present, and ongoing activities at the Don Plant have contributed to the cumulative degradation of certain tribal uses and resources including cultural resource sites; visual resources; the natural soundscape; and hunting, fishing, harvesting, wood gathering, and livestock grazing opportunities. If the land exchange is approved, the reasonably foreseeable construction of cooling ponds and gypsum stack expansions on the Federal lands may damage or result in further loss or degradation of tribal resources that are important to the Shoshone-Bannock Tribes. NRHP-eligible Site 10PR666 and other NRHP-ineligible sites would be damaged or destroyed by construction of these facilities, while NRHP-eligible Sites 10BK274 and 10PR979 (SB-02-HL) and NRHP-ineligible Site 10PR93 would no longer be subject to protection under Federal laws and regulations.</p> <p>The reasonably foreseeable actions on the Federal lands would result in incremental increases in concentrations of contaminants in groundwater and connected surface water resources utilized by minority populations within the socioeconomic study area (SESA); however, the estimated magnitude of effects on water quality resulting from the reasonably foreseeable actions, including leakage of mercury, arsenic, and phosphorus, described in Section 3.17 (<i>Water Resources</i>), are not anticipated to adversely affect fisheries that are important to the Shoshone-Bannock Tribes relative to baseline water quality conditions and declining trends in total concentrations of various contaminants from ongoing application of source controls and remedial actions at the Don Plant. Current fish consumption advisories for the Portneuf River and the American Falls Reservoir would remain in effect as long as deemed necessary by the Idaho Department of Health and Welfare.</p>	<p>Direct/Indirect Effects: Impacts on tribal treaty rights and trust responsibilities would be the same as described for the Proposed Action for the 719 acres of Federal lands and 667 acres of non-Federal lands. However, an additional 1,109 acres of non-Federal land would become available for tribal use under Alternative A, which would help mitigate adverse impacts on tribal treaty rights and uses compared to the Proposed Action.</p> <p>Cumulative Effects: Cumulative effects on tribal treaty rights, trust responsibilities, and tribal uses would be the same as described for the Proposed Action for the Federal and non-Federal lands. However, offering to convey 160 additional acres of land to the BLM and offering to donate 950 acres to the BIA or to the Shoshone-Bannock Tribes would help mitigate adverse impacts on tribal treaty rights and uses from the land exchange and reasonably foreseeable actions. Therefore, cumulative effects on tribal treaty rights, trust responsibilities, and tribal uses would be less under Alternative A than under the Proposed Action, and would help support policies and purposes in the Shoshone-Bannock Land Use Policy Ordinance, compared to the Proposed Action (Shoshone-Bannock Tribes 2010).</p>	<p>Direct/Indirect Effects: Impacts on tribal treaty rights, trust responsibilities, and tribal uses would generally be the same as described for the Proposed Action and Alternative A, as the total Federal land acreage would be similar to that under the Proposed Action and Alternative A. However, the Federal land area in Alternative B was reconfigured so that NRHP-eligible Site 10PR666 and the surrounding area would be retained under Federal ownership, but NRHP-eligible Site 10PR979 (SB-02-HL) would be transferred out of Federal ownership. Site 10PR666 could continue to be used by members of the Shoshone-Bannock Tribes, while Site 10PR979 (SB-02-HL) would no longer be accessible.</p> <p>Cumulative Effects: Cumulative effects on tribal treaty rights, trust responsibilities, and tribal uses would generally be the same as described for the Proposed Action and Alternative A, except with the reconfigured Federal lands boundary, NRHP-eligible site 10PR666 would remain in BLM ownership and available for tribal use. Newly recorded Site 10PR979 (SB-02-HL) is located within the Federal lands and may be directly disturbed by the south gypsum stack expansion.</p>
Geotechnical Stability	<p>Direct/Indirect Effects: No direct effects on geotechnical stability.</p> <p>Cumulative Effects: Simplot has not developed plans for the design and location of the gypsum stack compartments under the No Action Alternative, but any gypsum expansions would be subject to the same design criteria and regulations and contain the same chemical constituents as under the Proposed Action.</p> <p>No cooling ponds would be constructed on the Federal lands or within the present Don Plant boundary; therefore, there would be geotechnical stability issues associated with cooling ponds under the No Action Alternative.</p>	<p>Direct/Indirect Effects: No direct effects on geotechnical stability.</p> <p>Cumulative Effects: A formal failure mode effects analysis has not been completed for the reasonably foreseeable actions; however, potential failure modes for the gypsum stacks and cooling ponds may include a stability failure of their embankments or foundations, a breach of the embankment crest or slopes from severe erosion or cracking, or a hydraulic failure due to internal erosion or piping. With no runoff from the surrounding slopes and with the limited precipitation in the area, overtopping failure should not be a concern as long as adequate freeboard is maintained during operations.</p> <p>In the event of a failure of a gypsum stack, some portion of the retained gypsum slurry could be released and would flow downhill from the release point. Simplot estimates that in addition to any flowable gypsum slurry, each gypsum stack expansion on Federal land would contain approximately 110 to 150 acre-feet of free water. The volume, velocity, and runout distance would depend on the type and size of the breach, the volume and physical characteristics of the unconsolidated slurry, and the topography at and below the breach location.</p> <p>In the event of a failure of a cooling pond, some or all of the cooling water would be released and would flow downhill from the release point. Each cooling pond would have a capacity of approximately 500 acre-feet. The volume, velocity, and runout distance would depend on the type and size of the breach, the volume of water in the pond, and the topography at and below the breach location.</p>	<p>Direct/Indirect Effects: No direct effects on geotechnical stability.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: No direct effects on geotechnical stability.</p> <p>Cumulative Effects: In general, the types of impacts on geotechnical stability would be the same as described for the Proposed Action and Alternative A. However, under Alternative B the west gypsum stack would not be expanded onto the Federal lands and as a result the east and south gypsum stack expansions would generally need to be larger to accommodate anticipated gypsum waste disposal needs at the Don Plant. As a result, the potential for failure of the west gypsum stack expansion may be decreased while the potential failure of the east and south gypsum stacks and run-out area of a failure may be increased compared to the Proposed Action and Alternative A.</p> <p>Avoiding gypsum stack expansion into the west canyon area, which has steeply sloping terrain, by expanding into the more gently sloping terrain to the south and east of the existing gypsum stack would provide for easier construction of the gypsum stacks and the liners.</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Hazardous or Solid Wastes	<p>Direct/Indirect Effects: Activities at the Don Plant would continue to result in the transport, use, storage, and disposal of hazardous or solid wastes, which could affect certain resources such as air quality, soils, vegetation, and water resources. However, under the No Action Alternative, there would be no additional direct or indirect effects on hazardous or solid wastes because ownership, management, and liabilities associated with the Federal and non-Federal lands would remain unchanged.</p> <p>Cumulative Effects: Ongoing activities at the Don Plant would continue to result in the transport, use, storage, and disposal of hazardous or solid wastes, which could affect certain resources such as air quality, soils, vegetation, and water resources. However, because there would be no additional effects on hazardous or solid wastes associated with the land exchange, the No Action Alternative is not expected to contribute to additional cumulative effects.</p>	<p>Direct/Indirect Effects: The proposed land exchange would make the new owners responsible for management of their respective lands and for any future liabilities on those lands related to any existing and future hazardous and solid wastes, unless the transfer agreement or other agreement indemnified one of the parties against such liabilities. In the absence of an indemnification agreement, the acquirer may have additional protection against Comprehensive Environmental Response, Compensation, and Liability Act liabilities under an innocent landowner defense, as described in the Superfund Amendments and Reauthorization Act of 1986. The BLM and Simplot would negotiate removal of the solid waste and mitigation of the two physical hazards identified in the Phase I environmental site assessment for the non-Federal lands (see Appendix J) to the satisfaction of the BLM authorized officer prior to the BLM’s acceptance of title to the property.</p> <p>Cumulative Effects: Potential cumulative effects from a major release from the gypsum stack expansions or the cooling ponds are discussed in Section 3.5 (<i>Geotechnical Stability</i>). Although both the gypsum stack expansion and the cooling ponds would be lined, leakage through the liners could release contaminants into the soil and groundwater. Potential cumulative effects on groundwater are discussed in Section 3.17 (<i>Water Resources</i>) and in Appendix H (<i>Water Resources Technical Report</i>). Wind erosion may disburse phosphogypsum particles in the area of the gypsum stacks, especially during construction or maintenance of the embankments. Any such distribution of phosphogypsum particles would be similar to the effects of wind erosion on the existing gypsum stacks.</p>	<p>Direct/Indirect Effects: Same as Proposed Action.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Same as Proposed Action.</p> <p>Cumulative Effects: Cumulative effects on hazardous or solid wastes would be similar to those described for the Proposed Action, except the new phosphogypsum waste disposal area would be configured to fit within the Alternative B Federal lands boundary. This could result in a slight variation in area that would be affected in the event of a gypsum stack release (see Section 3.5, <i>Geotechnical Stability</i>) and areas affected by to dispersion of phosphogypsum particles.</p>
Public Health and Safety	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on fog and ice formation.</p> <p>Cumulative Effects: The No Action Alternative would have no new direct or indirect effects on public safety from fogging and icing of roadways because the cooling ponds would not be constructed.</p>	<p>Direct/Indirect Effects: The land exchange would not increase the potential for fog and ice formation on roadways and would therefore not have any direct impacts on public health and safety from fog and ice formation. The Phase I environmental site assessment for the non-Federal lands (see Appendix J) identified two physical safety hazards. The BLM and Simplot would negotiate mitigation of the two physical hazards to the satisfaction of the BLM authorized officer prior to the BLM’s acceptance of title to the property.</p> <p>Cumulative Effects: Reasonably foreseeable actions associated with the Proposed Action could result in short-term and localized fogging and icing on U.S. Highway 30 and Interstate 86 throughout the operational life of the cooling ponds. The fog and icing could create short-term, unsafe driving conditions in localized areas, particularly during the winter months.</p>	<p>Direct/Indirect Effects: Same as Proposed Action.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Same as Proposed Action.</p> <p>Cumulative Effects: Same as Proposed Action.</p>
Recreation	<p>Direct/Indirect Effects: Recreational opportunities and use would continue on the Federal lands as they have in the past including mountain biking, hiking/running, driving for pleasure, hunting, cross-country skiing, and other recreational activities.</p> <p>The non-Federal lands would continue to be retained in private ownership and the potential beneficial impacts from establishing additional legal access where designated routes of the Chinese Peak-Blackrock Trail system enter the non-Federal land and voluntary mitigation Parcel A would not occur.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on recreation and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The Proposed Action would result in a net loss of 52 acres of BLM-administered land within the Pocatello SRMA (approximately 0.16 percent of land within the Pocatello SRMA). The Federal lands included in the land exchange are entirely contained within the West Bench Recreation Management Zone (RMZ) (Appendix C, Map 11). Transferring the Federal lands into private land ownership would remove these lands from the Pocatello SRMA and remove the BLM’s ability to actively manage these areas for recreation access and targeted recreational opportunities and outcomes.</p> <p>The 667 acres of non-Federal lands that the BLM would acquire would be managed for recreation opportunities and outcomes consistent with the management objectives of the Pocatello SRMA and Blackrock RMZ. Transfer of the non-Federal lands into BLM administration would allow the establishment of legal access for designated routes T0351, T0352, and 0324, where the routes traverse the non-Federal land. Access for non-motorized and non-mechanized recreational activities would be available from Blackrock Canyon Road (Instrument No. 823202), Route T0351, Route T0352, and Route 0324 where the routes intersect the non-Federal land. The BLM’s acquisition of the non-Federal lands would also provide additional access to the BLM’s Chinese Peak-Blackrock Trail System within Blackrock Canyon and Caddy Canyon.</p> <p>Cumulative Effects: The BLM did not identify any past, present, or reasonably foreseeable actions that would combine with direct and indirect impacts from the land exchange to result in cumulative effects on recreation.</p>	<p>Direct/Indirect Effects: Under Alternative A, the land exchange would result in an additional 160 acres of non-Federal land being transferred into BLM ownership, resulting in a total of 827 acres of land that the BLM would acquire in the land exchange. This represents a net gain of 108 acres of public lands resulting from the land exchange that would be managed to meet the objectives of the Pocatello SRMA and Blackrock RMZ. Impacts on recreation under Alternative A would generally be the same as the impacts described for the Proposed Action, but increased based on the additional 160 acres of non-Federal lands included in voluntary mitigation Parcel A in the Pocatello SRMA and the Blackrock Canyon and Caddy Canyon areas that would be transferred to the BLM.</p> <p>Alternative A would include the same Federal lands in the land exchange as the Proposed Action. As a result, impacts on recreation and access associated with transferring ownership</p>	<p>Direct/Indirect Effects: Under Alternative B, the land exchange would include the same non-Federal lands being transferred from private ownership to the BLM as Alternative A. As a result, impacts on recreation and access associated with the non-Federal lands would be the same as those under Alternative A, including the increased recreational access and benefits associated with voluntary mitigation Parcel A being transferred into BLM administration and managed to meet the objectives of the Pocatello SRMA and Blackrock RMZ.</p> <p>Alternative B would include a different configuration of Federal lands included in the exchange with approximately 8 fewer acres than the Proposed Action and Alternative A (Appendix C, Map 11). Due to the relatively similar acreage of Federal land acreage being transferred out of BLM administration in the West Bench RMZ, recreation impacts associated with the Federal lands are anticipated to be similar to those under the Proposed Action and Alternative A.</p> <p>Cumulative Effects: Same as Proposed Action.</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
			of the Federal lands to Simplot would be the same as those of the Proposed Action. Cumulative Effects: Same as Proposed Action.	
Visual Resources	Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on visual resources. Cumulative Effects: The No Action Alternative would not contribute to cumulative effects.	Direct/Indirect Effects: The 719 acres of Federal lands conveyed to Simplot, which include 447 acres of VRM Class III and 236 acres of Visual Resource Management (VRM) Class IV, would no longer be subject to BLM VRM objectives. Activities that create visual contrast and affect scenic quality of the landscape would occur at the discretion of the new landowner. The 667 acres of non-Federal lands conveyed to the BLM would be assigned to VRM classes consistent with those of adjacent lands, which are generally Class III in the northern non-Federal land parcels and Class IV in the southern non-Federal land parcels. Cumulative Effects: Reasonably foreseeable construction of cooling ponds and gypsum stacks on the Federal lands would introduce visual contrasts to the landscape, altering the existing visual character. These actions would convert an estimated 290 acres of the Federal lands and 188 acres of Simplot lands from a generally natural landscape to a modified industrial landscape. These changes would be in contrast with surrounding undeveloped lands to the west, south, and east of the Federal lands. However, the planned facilities would be similar in appearance to the existing gypsum stack directly adjacent to the northern boundary of the Federal lands. No reasonably foreseeable actions that could affect visual resources were identified on the non-Federal lands.	Direct/Indirect Effects: Direct and indirect effects on visual resources would be the same as described for the Proposed Action, with the following differences: <ul style="list-style-type: none">Voluntary mitigation Parcel A (160 acres) would be conveyed to the BLM and managed as VRM Class III. This would increase the acreage of lands managed under the BLM VRM system within the Pocatello Field Office by 160 acres.Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Activities that create visual contrast and affect scenic quality of the landscape would occur at the discretion of the new landowner. Cumulative Effects: Same as Proposed Action.	Direct/Indirect Effects: The 711 acres of Federal lands conveyed to Simplot, which include 620 acres of VRM Class III and 51 acres of VRM Class IV, would no longer be subject to BLM VRM objectives. Activities that create visual contrast and affect scenic quality of the landscape would occur at the discretion of Simplot. Direct and indirect effects on visual resources on the non-Federal lands would be the same as described for Alternative A. Cumulative Effects: Cumulative effects on visual resources from Alternative B would be similar to those of Alternative A, but Alternative B is estimated to convert 51 more acres of generally natural landscape to a modified industrial landscape. The different gypsum stack configuration is likely to increase the visibility of embankments as seen from the observation points on Interstate 86 and U.S. Highway 30 northeast of the Don Plant; however, the types of visual contrasts created by the embankments would be the same as for Alternative A.
Lands and Realty	Direct/Indirect Effects: Under the No Action Alternative, the proposed land exchange would not occur; the existing ownership, rights-of-way, and public access to Federal lands would remain as described in Section 3.10.2 (<i>Affected Environment</i>). Cumulative Effects: Under the No Action alternative, the land exchange would not occur and the reasonably foreseeable actions would not be implemented. Therefore, there would be no cumulative effects on rights-of-way, access, and easements under the No Action alternative.	Direct/Indirect Effects: The Proposed Action would include the exchange of both surface and subsurface rights for the Federal and non-Federal lands. Existing right-of-way authorizations encumbering both the Federal and non-Federal lands would be transferred to the new owner or reserved. Simplot and the BLM have agreed that no additional reservations, exceptions, covenants, restrictions, or encumbrances shall be placed on the Federal or non-Federal lands without notice to the corresponding party. The proposed land exchange would meet goals, objectives, and management actions of the Pocatello RMP (BLM 2012) by consolidating Federal land ownership and acquiring high resource value lands in the Blackrock and Caddy Canyon areas (i.e., non-Federal lands), while disposing of Federal lands that generally have lower resource values due to their proximity to the existing Don Plant and are more difficult to manage due to the surrounding land uses and land ownership. The Proposed Action would result in the loss of public access to and use of the Federal lands, but would establish additional public access to the non-Federal lands for recreation and other uses. Cumulative Effects: Planned construction of the gypsum stack expansions and cooling ponds may require relocation of the following existing rights-of-way on the Federal lands: <ul style="list-style-type: none">Right-of-way IDI-001123 (held by Union Pacific Railroad)Right-of-way IDI-0-3990 (held by Idaho Power Company)Right-of-way IDI-022083 (held by Simplot for an air quality monitoring facility) These potential rights-of-way conflicts would be resolved by Simplot and the right-of-way holder. No reasonably foreseeable actions were identified on the non-Federal lands that would contribute to cumulative effects on rights-of-way, access, or easements.	Direct/Indirect Effects: Inclusion of voluntary mitigation Parcel A would increase the benefits of consolidating land ownership in the area, compared to the Proposed Action, and would result in a net gain of 108 acres of BLM-administered lands available for public use. Cumulative Effects: Same as Proposed Action.	Direct/Indirect Effects: The direct and indirect effects of the proposed land exchange would be the same as under Alternative A, except the Federal lands exchanged under Alternative B would have a different configuration (Appendix C, Map 2) and contain 8 fewer acres. No additional rights-of-way or easements are located inside the Federal lands proposed for exchange when compared to the Proposed Action. Cumulative Effects: Same as Proposed Action.
Geology and Paleontology	Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on geological or paleontological resources. Cumulative Effects: The No Action Alternative would have no cumulative effects on geological or paleontological resources.	Direct/Indirect Effects: The Proposed Action would result in the transfer of 667 acres of non-Federal land into BLM administration. As a result, the BLM would manage the 667 acres of lands under the Paleontological Resources Protection Act and in accordance with the goals, objectives, and management actions in the Pocatello RMP (BLM 2012). The non-Federal lands have a low potential for paleontological resources (Potential Fossil Yield Classification [PFYC] 2); as a result there are no anticipated direct impacts on paleontological resources or the BLM’s management of paleontological resources.	Direct/Indirect Effects: Same as Proposed Action. Cumulative Effects: Same as Proposed Action.	Direct/Indirect Effects: Same as under the Proposed Action, except that the Federal land acreage transferred out of BLM administration would include approximately 38 fewer acres of PFYC 4 areas. Cumulative Effects: Construction of the reasonably foreseeable actions under Alternative B would result in an estimated disturbance of 180 acres in PFYC 4 on the Federal lands, an increase of 40 acres compared to the Proposed Action and

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
		<p>The Proposed Action would result in the transfer of 719 acres of Federal land into private ownership. The Federal lands do include approximately 449 acres with a PFYC of 4; however, paleontological surveys of areas with high paleontological potential did not identify any fossil material. As a result, minimal impacts on paleontological resources and their management are anticipated from transferring the Federal lands out of BLM administration.</p> <p>Cumulative Effects: Past and present actions on the Federal and non-Federal lands, including construction and maintenance of rights-of-way and easements, are anticipated to have had minimal impacts on paleontological resources due to the relatively low PFYC ratings and the limited amount of rights-of-way on the lands. Excavation associated with construction of the expanded gypsum stacks and cooling ponds on Federal lands could result in inadvertent destruction or damage to paleontological resources in the PFYC 4 areas. However, surveys conducted in PFYC 4 areas on the Federal lands did not identify any fossil materials. As a result, potential impacts on paleontological resources from the reasonably foreseeable actions are expected to be low.</p>		<p>Alternative A. However, based on surveys conducted in PFYC 4 areas on the Federal lands, the additional area of disturbance in PFYC 4 under Alternative B would occur in areas that are volcanic with no interbedded sedimentary deposits; therefore, the potential for fossil occurrence in these areas is low.</p>
Livestock Grazing	<p>Direct/Indirect Effects: Grazing use of the non-Federal lands would likely continue at similar utilization levels at the discretion of Simplot.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on livestock grazing and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The Federal lands would no longer be available for livestock grazing after being conveyed to Simplot. The BLM estimates that the 719 acres of Federal lands support an estimated 70 animal unit months (AUMs) (BLM 2019c), or approximately 10.2 acres per AUM. Loss of these AUMs would decrease the total AUMs available within the Trail Creek-2 allotment and decrease BLM revenues received from grazing fees.</p> <p>The non-Federal lands have historically been used for livestock grazing, often in conjunction with adjacent BLM-administered lands. Based on utilization trends for adjacent Federal lands, the BLM estimates that they support approximately 44 AUMs, or about 15 acres per AUM. After the exchange, the non-Federal lands would be available for livestock grazing subject to the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997) or goals, objectives, and management actions for livestock grazing specified in the Pocatello RMP (BLM 2012).</p> <p>Cumulative Effects: None of the reasonably foreseeable actions would contribute to cumulative effects on livestock grazing because the Federal lands would no longer be available for livestock grazing after the land exchange. No reasonably foreseeable actions were identified on the non-Federal lands that have the potential to contribute to cumulative effects on livestock grazing.</p>	<p>Direct/Indirect Effects: Direct and indirect effects on livestock grazing would be the same as described for the Proposed Action, with the following differences:</p> <ul style="list-style-type: none">Voluntary mitigation Parcel A (160 acres and an estimated 10.6 AUMs) would be conveyed to the BLM and available for livestock grazing within the Blackrock allotment. This would increase the acreage and forage available for livestock grazing on BLM-administered lands within the Blackrock allotment.Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Livestock grazing on these lands would be at the discretion of the new landowner. <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Direct and indirect effects on livestock grazing would be the same as described for Alternative A, except the reconfigured Alternative B Federal lands would support approximately 69 AUMs, 1 fewer than the Proposed Action and Alternative A.</p> <p>Cumulative Effects: Same as Proposed Action.</p>
Soils	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on soils; contaminant concentrations in soils surrounding the Don Plant would continue to be monitored in accordance with existing environmental compliance requirements and protocols.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on soils and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The transfer of 719 acres of land out of Federal ownership would result in the Federal lands no longer being subject to the BLM’s soil management actions described in the Pocatello RMP (BLM 2012). The proposed land exchange would also transfer lands with contaminated soils related to the Off-Plant Operable Unit of the Eastern Michaud Flats Superfund Site out of Federal ownership and to a potentially responsible party (i.e., Simplot), which would release the BLM from associated management responsibilities and liabilities. The soil management goals and objectives set forth in the Pocatello RMP would no longer apply and the implementation plan to achieve these goals and objectives would no longer be required. Specifically, resource protections to minimize soil loss from surface disturbance and promote reclamation success listed under Goal SW-1 would no longer apply after the land exchange but may be subject to State permitting reclamation standards.</p> <p>The transfer of 667 acres of non-Federal land into Federal ownership would result in the non-Federal lands becoming subject to the goals, objectives, and management actions for soils identified and described in the Pocatello RMP (BLM 2012). BLM management actions that would be applied to the non-Federal lands would generally require the incorporation of specific protections for soils for any BLM-authorized actions that could affect soils.</p> <p>Cumulative Effects: Soil disturbance from the reasonably foreseeable actions would affect an estimated 290 acres of the Federal lands and 188 acres of Simplot private lands. Simplot’s application of best management practices specified in permits</p>	<p>Direct/Indirect Effects: Impacts on soils would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for soils identified and described in the Pocatello RMP. Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Soils within these lands would be subject to management objectives and actions by the new landowner.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Impacts on soils would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for soils identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the soil management goals, objectives, and management actions in the Pocatello RMP.</p> <p>Cumulative Effects: Cumulative effects from Alternative B would be similar to those of the Proposed Action, except the location of the reasonably foreseeable actions would differ with respect to the terrain and soil types present. Soil disturbance from the reasonably foreseeable actions would affect an estimated 326 acres of the Federal lands and 171 acres of Simplot lands. Reasonably foreseeable actions under Alternative B would disturb approximately 36 more acres of Federal lands and 17 fewer acres of Simplot lands than under the Proposed Action. This would include 270 acres of soils with high erosion potential (73 more acres than under the Proposed Action) and 308 acres with high runoff potential (36 more acres than under the Proposed Action). Due to the greater area of soil</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
		obtained under requirements of the National Pollutant Discharge Elimination System stormwater program would minimize the potential for soil loss and erosion during construction and operational activities; however, some level of erosion and conveyance of sediment to downgradient waters is anticipated due to the large acreages of disturbed, unvegetated soils that would be exposed during phased construction activities and the steep terrain of the Federal lands. No reasonably foreseeable actions with the potential to affect soils on the non-Federal lands have been identified at this time.		disturbance and higher potential for erosion and runoff, the configuration of the gypsum stack expansions under Alternative B is anticipated to have a greater adverse effect on soils than for the Proposed Action.
Vegetation	Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on vegetation; contaminant concentrations in soils surrounding the Don Plant would continue to be monitored in accordance with existing environmental compliance requirements and protocols. Cumulative Effects: The No Action Alternative would have no direct or indirect effects on vegetation and, therefore, would not contribute to cumulative effects.	Direct/Indirect Effects: The transfer of the 719 acres of Federal land out of Federal ownership would result in the Federal lands no longer being subject to the BLM’s vegetation management actions described in the Pocatello RMP (BLM 2012). The vegetation goals and objectives set forth in the Pocatello RMP would no longer apply and the implementation plan to achieve these goals and objectives would no longer be required. The Proposed Action would also transfer 667 acres of non-Federal land into Federal ownership, which would result in the non-Federal lands being subject to the vegetation goals, objectives, and management actions identified and described in the Pocatello RMP. The Pocatello RMP management actions on non-Federal lands would generally result in protection and restoration of native vegetation (including special status plants) and management of invasive species/noxious weeds, which are actions not currently occurring on non-Federal lands. Cumulative Effects: The reasonably foreseeable development of cooling ponds and expanded gypsum stacks on the Federal lands would result in 290 acres of surface disturbance and clearing of vegetation. Indirect impacts from the potential establishment and spread of noxious and invasive species could occur in and around the cooling ponds and gypsum stack disturbance area. Establishment or spread of noxious and invasive species could result in decreased resilience of native plant communities. The BLM’s development of a 5-year noxious weed treatment plan would result in long-term beneficial effects on vegetation on non-Federal lands. No other direct or indirect effects on vegetation are anticipated on the non-Federal lands as a result of the land exchange.	Direct/Indirect Effects: Impacts on vegetation would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for vegetation identified and described in the Pocatello RMP. Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Vegetation within these lands would be subject to management objectives and actions by the new landowner. Cumulative Effects: Same as Proposed Action.	Direct/Indirect Effects: Impacts on vegetation would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for vegetation identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the vegetation management goals, objectives, and management actions in the Pocatello RMP. Cumulative Effects: For the reconfigured Federal land area under Alternative B, the reasonably foreseeable development of cooling ponds and expanded gypsum stacks on the Federal lands would result in surface disturbance and the removal of 326 acres of vegetation, an increase of 36 acres compared to the Proposed Action. As under the Proposed Action, indirect impacts from the potential establishment and spread of noxious and invasive species could occur in and around the cooling ponds and gypsum stack disturbance area. Establishment or spread of noxious and invasive species could result in decreased resilience of native plant communities and transition to a less desirable vegetative state. The effects on vegetation on non-Federal lands under Alternative B would be the same as those under Alternative A.
Wetlands and Riparian Zones	Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on wetlands and riparian zones. Cumulative Effects: The No Action Alternative would have no direct or indirect effects on wetlands and riparian zones and, therefore, would not contribute to cumulative effects.	Direct/Indirect Effects: The Proposed Action would have no direct effects on wetlands and riparian zones; however, the transfer of ownership in the Federal and non-Federal lands could result in indirect effects due to the change in wetland and riparian zone management associated with transferring lands between a private entity and a Federal land management agency. Cumulative Effects: If the land exchange is approved, the reasonably foreseeable development of cooling ponds on the Federal lands would have no direct impacts on wetlands or the riparian zone associated with the Portneuf River because no wetlands have been identified on the Federal lands and the Portneuf River riparian zone is approximately 630 feet away from the nearest area of proposed disturbance. Indirect impacts on the Portneuf River riparian zone from development of the cooling pond could include overland runoff and introduction of contaminants such as sediment from surface-disturbing activities. However, railroad tracks and a paved road run adjacent to the riparian zone and separate the disturbance area from the riparian zone. No direct or indirect effects are anticipated on wetlands and riparian zones on the non-Federal lands as a result of the land exchange and no reasonably foreseeable actions were identified that could contribute to cumulative effects.	Direct/Indirect Effects: Impacts on wetlands and riparian zones would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership (voluntary mitigation Parcel A), including one seep, approximately 5 acres of riparian vegetation, and 0.3 mile of intermittent streams. These features would be subject to the goals, objectives, and management actions for wetlands and riparian zones identified and described in the Pocatello RMP. Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Wetlands and riparian zones within these lands, which include approximately 37 acres of riparian vegetation, 1.1 miles of perennial streams, and 1.4 miles of intermittent streams, would be subject to management objectives and actions by the new landowner. Cumulative Effects: Same as Proposed Action.	Direct/Indirect Effects: Impacts on wetlands and riparian zones would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership, including the identified seeps/wetland and riparian zones, that would be subject to the goals, objectives, and management actions for wetlands and riparian zones identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the wetland and riparian management goals, objectives, and management actions of the Pocatello RMP. The Alternative B Federal lands contain approximately 0.4 fewer miles of intermittent streams than the Proposed Action and Alternative A Federal lands. Cumulative Effects: Cumulative effects on wetlands and riparian zones on the Federal lands under Alternative B would be the same as described for the Proposed Action but with slightly less permanent impact on riparian vegetation compared to Alternative A (2 acres instead of 17 acres). The effects on wetlands and riparian zones on non-Federal lands under Alternative B would be the same as described for Alternative A.

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Fish and Wildlife	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on fish and wildlife.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on fish and wildlife and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The Proposed Action would have no direct effects on fish and wildlife; however, the transfer of ownership in the Federal and non-Federal lands could result in indirect effects due to the change in fish and wildlife and habitat management associated with transferring lands between a private entity and a Federal land management agency.</p> <p>The transfer of 719 acres of land out of Federal ownership would result in the Federal lands no longer being subject to the BLM’s fish and wildlife management actions described in the Pocatello RMP or best management practices identified in the Pocatello RMP.</p> <p>The Proposed Action would also transfer 667 acres into Federal ownership, which would result in the non-Federal lands being subject to the fish and wildlife goals, objectives, and management actions described in the Pocatello RMP. The Pocatello RMP management actions on non-Federal lands would generally result in protection of fish and wildlife and their habitats (including BLM sensitive species), which are actions not currently occurring on the non-Federal lands. In addition, acquisition of the non-Federal lands would consolidate the BLM’s land administration in an area containing crucial mule deer winter range, which would result in a net gain of 551 acres of BLM-administered crucial mule deer range that would be managed in accordance with the Pocatello RMP and other Federal guidance.</p> <p>Cumulative Effects: If the Proposed Action is approved, the reasonably foreseeable development of cooling ponds and gypsum stacks on the Federal lands would permanently remove or alter 290 acres of wildlife habitat. Habitat loss or alteration would be long term and result in direct losses of smaller, less-mobile species of wildlife, such as small mammals and reptiles, and the displacement of more-mobile species into adjacent habitats. In most instances, suitable habitat adjacent to disturbance areas would be available for use by these species. However, displacement would increase competition and could include some local reductions in wildlife populations if adjacent habitats are at carrying capacity.</p> <p>Development and operation of the cooling ponds and expanded gypsum stacks on the Federal lands would result in noise, traffic, and other related activities that can affect wildlife.</p> <p>Potential effects on mule deer from the reasonably foreseeable actions on the Federal land would include the long-term reduction of approximately 141 acres of mule deer winter range habitat on the Federal lands and 57 acres on private lands abutting the Federal lands from vegetation removal. In addition, mule deer may experience increased mortality rates due to increased human activities and vehicle use on roads associated with development and operation of cooling ponds and gypsum stacks.</p> <p>If the Proposed Action is approved, the reasonably foreseeable development of cooling ponds and gypsum stacks on the Federal lands is not anticipated to affect fisheries in the Portneuf River or watershed. No construction would occur in the Portneuf River, and the short, 100-foot segment that flows through the northeastern corner of the Federal lands is approximately 630 feet away from the nearest area of proposed disturbance. In addition, phosphate loading in the Portneuf River, which has affected oxygen levels and aquatic life, has been declining and is anticipated to continue to decline with the expanded gypsum stacks with Simplot’s adherence to the Voluntary Consent Order and Compliance Agreement with the IDEQ (2008), which is intended to fulfill Simplot’s obligations for the Portneuf River Total Maximum Daily Load.</p> <p>No reasonably foreseeable actions were identified that could contribute to cumulative effects on fish and wildlife on non-Federal lands. Following transfer of the 667 acres of non-Federal lands into BLM administration, the BLM would manage fish and wildlife habitat in accordance with the Pocatello RMP.</p>	<p>Direct/Indirect Effects: Impacts on fish and wildlife would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for fish and wildlife identified and described in the Pocatello RMP. In addition, the acquisition of voluntary mitigation Parcel A would further consolidate the BLM’s land administration in an area containing crucial mule deer winter range, which would result in a net gain of 582 acres of BLM-administered crucial mule deer range that would be managed in accordance with the Pocatello RMP and other guidance.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Impacts on fish and wildlife would be similar to those described in Alternative A except that Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the fish and wildlife management goals, objectives, and management actions in the Pocatello RMP.</p> <p>Cumulative Effects: Cumulative effects on fish and wildlife on the Federal lands would be similar to those under the Proposed Action, but with the following differences. Permanent habitat removal and alteration on the Federal lands would include 326 acres of wildlife habitat (see Section 3.14, <i>Vegetation</i>), an increase of 36 acres compared to the Proposed Action and Alternative A. This habitat impact area constitutes 0.03 percent of the wildlife analysis area and approximately 0.3 percent of existing disturbed areas in the wildlife analysis area. Potential direct effects on mule deer would include the long-term reduction of approximately 166 acres of mule deer winter range habitat on the Federal lands and 57 acres on private lands adjacent to the Federal lands, which is less than 0.1 percent of the mule deer analysis area and approximately 1.0 percent of existing disturbed areas in the mule deer analysis area. None of the three large stick nests documented on cliff substrate are within the Alternative B Federal lands boundary and none would be removed by construction of the reasonably foreseeable actions.</p> <p>The effects on fish and wildlife on non-Federal lands under Alternative B are the same as described for Alternative A.</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Water Resources	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on water quality; the ongoing remedial actions and trends in groundwater quality are expected to continue. Overall, concentrations of contaminants of concern in monitoring wells, springs, and the Portneuf River have shown declining trends since source controls and extraction activities were implemented at the Don Plant. Arsenic currently exceeds Idaho and Federal primary drinking water standards at the site. Concentrations of total phosphorous in the Portneuf River show a declining trend, but are still above the regulatory targets.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on water resources and, therefore, would not contribute to cumulative effects. Failure to obtain the Federal lands for expansion of the gypsum stacks would eliminate the potential for incremental increases in arsenic and phosphorus concentrations due to leakage through the liners of expanded gypsum stacks. In addition, if Simplot is unable to develop a feasible alternative strategy for gypsum disposal, the existing gypsum stack is projected to reach design capacity by 2031, which may result in closure of the Don Plant. As a result, potential impacts on water resources associated with production at the Don Plant would be reduced, compared to the action alternatives.</p>	<p>Direct/Indirect Effects: The transfer of the 719 acres of Federal land out of Federal ownership would result in the Federal lands no longer being subject to the BLM’s water resource goals, objectives, and management actions described in the Pocatello RMP (BLM 2012). As a result, the Federal lands and reasonably foreseeable development on the Federal lands would not have the same management objectives for promoting the protection of watersheds described in the Pocatello RMP.</p> <p>The Proposed Action would transfer 667 acres of non-Federal land into Federal ownership, which would result in the non-Federal lands being subject to the water resource goals, objectives, and management actions in the Pocatello RMP (BLM 2012).</p> <p>Cumulative Effects: Operation of the cooling ponds and gypsum stack expansions on the Federal lands would result in incremental additions to phosphorous and arsenic loading due to leakage through the liners. Incremental increases in contaminant concentrations are estimated to peak at approximately 0.000089 milligram per liter (mg/L) in the processing facility for arsenic and 0.000156 mg/L at Siphon Bridge for phosphorus. These increases represent approximately 0.04 percent and 0.07 percent of the existing baseline (year 2019) concentrations of arsenic and phosphorus, respectively, at these monitoring locations. Additionally, ongoing operations and the reasonably foreseeable actions, including operation of the groundwater extraction system, would result in an overall decrease in phosphorous and arsenic concentration at the extraction wells and the Portneuf River in response to remedial actions at the gypsum stacks and the Don Plant. After 2039, the effects of the lining and phosphoric acid plant infrastructure improvements would be fully realized and concentrations would continue to decrease at a lower rate through the end of the assumed operating period (2084). After operations cease, concentrations at the extraction area decline until reaching 0.004 mg/L (arsenic) and 0.08 mg/L (phosphorous) in 2140. Concentrations of phosphorus at the Portneuf River are predicted to decline to the long-term average of about 0.09 mg/L by about 2030. The predicted total phosphorus concentrations would not decrease to the required 0.075 mg/L for any year modeled, which constitutes an adverse effect.² However, the maximum incremental phosphorus concentration associated with the reasonably foreseeable actions contributes only 0.2 percent of the concentration required by the 2008 Voluntary Consent Order and Compliance Agreement.</p>	<p>Direct/Indirect Effects: Impacts on water resources would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for water resources identified and described in the Pocatello RMP.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Impacts on water resources would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for water resources identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the water resource management goals, objectives, and management actions in the Pocatello RMP.</p> <p>Cumulative Effects: Simplot anticipates that the reconfigured gypsum stack expansions under Alternative B would have approximately the same gypsum waste disposal capacity as the gypsum stack expansions that would be developed as a result of the Proposed Action. However, compared to the Proposed Action, the location of the Alternative B gypsum stack expansions is anticipated to eliminate additional loading to the west canyon area, while increasing loading to in the east and south canyon areas. This could result in higher phosphorous and arsenic loading to groundwater extraction wells on the east side of the Don Plant site and could change the duration of maximum concentrations, but is unlikely to affect the overall downward trend in concentrations resulting from the lining of the existing gypsum stacks and continued application of other source controls.</p>
Socioeconomics and Environmental Justice	<p>Direct/Indirect Effects: The No Action Alternative is not projected to affect staffing at the Don Plant or associated facilities. This means that no increase in population, effects on housing, or other social impacts (such as stresses on schools, public services, or utilities, or changes in quality of life) would occur.</p> <p>Under the No Action Alternative, the Don Plant and the related facilities would continue to pay approximately \$3,916,306 in real property and personal property taxes. Because the plant operations would cease sooner under the No Action Alternative, taxes would be collected for fewer years than under the Proposed Action, resulting in long-term, adverse effects.</p> <p>The No Action Alternative would have minimal impacts on nonmarket values, as the non-Federal lands are and would remain unavailable for recreation or other uses by the public because they are private lands. In case the increased cost associated with siting a new gypsum stack farther away from the existing facility would require scaled-down operations or plant shutdown for an unknown period of time, any impacts from noise, human</p>	<p>Direct/Indirect Effects: Should the land exchange be approved, payment in lieu of taxes for the Federal lands would no longer be available for both Power and Bannock Counties. Power County would receive an actual property tax assessment for the Federal lands that occur within the county (approximately 507 acres). Bannock County would receive a property tax assessment for the portion of Federal lands that occur within the county (approximately 212 acres), but would lose the property tax assessment for the non-Federal lands (approximately 667 acres). There would be loss of approximately 455 acres available for property tax assessment within Bannock County; however, the non-Federal lands would be available for payment in lieu of taxes.</p> <p>As stated in Section 3.12 (<i>Livestock Grazing</i>), the 719 acres of Federal lands proposed for exchange yield 70 AUMs and earn \$94.50 in annual grazing fees. This grazing fee would be forgone if the Federal lands are transferred to private ownership under the Proposed Action. The Federal lands currently support an estimated \$2,852.50 (70 x \$40.75) annually of direct economic value. This economic value from livestock grazing would be forgone under the Proposed Action because the Federal lands would no longer be available for livestock grazing.</p> <p>The Proposed Action would not create disproportionately high and adverse human health or environmental effects on minority and low-income populations.</p>	<p>Direct/Indirect Effects: Power County would lose the property tax assessment for voluntary donation Parcel B (approximately 950 acres). There would be a loss of approximately 443 acres of lands available for property tax assessment within Power County. Bannock County would lose the property tax assessment for the non-Federal lands and voluntary mitigation Parcel A (827 acres), but would receive a property tax assessment for the portion of Federal lands that occur within the county (approximately 212 acres). There would be a loss of approximately 614 acres of lands available for property tax assessment; however, the non-Federal lands and voluntary mitigation Parcel A would be available for payment in lieu of taxes.</p> <p>Transfer of the 950-acre voluntary donation Parcel B from private ownership to the BIA or the Shoshone-Bannock Tribes would convey socioeconomic values associated with</p>	<p>Direct/Indirect Effects: Power County would receive an actual property tax assessment for the Federal lands that occur within the county (approximately 206 acres), but lose the property tax assessment for voluntary donation Parcel B (approximately 950 acres). There would be a loss of approximately 744 acres of lands available for property tax assessment within Power County.</p> <p>Bannock County would receive a property tax assessment for the portion of Federal lands that occur within the county (approximately 500 acres), but would lose the property tax assessment for the non-Federal lands (827 acres) and voluntary mitigation Parcel A. There would be a loss of approximately 326 acres of lands available for property tax assessment within Bannock County; however, the non-Federal lands and voluntary mitigation Parcel A would be available for payment in lieu of taxes.</p> <p>Alternative B would not create disproportionately high and adverse human health or environmental effects on minority populations in the SESA.</p>

² The statistical metric for the EIS modeling differs from the modeling calculations used to determine compliance with the 2008 Voluntary Consent Order and Compliance Agreement. The EIS modeling is intended to provide an analysis of potential impacts based on existing information. Compliance with target phosphorus concentrations required by the 2008 Voluntary Consent Order and Compliance Agreement will be evaluated and determined by regulatory agencies through a separate process, independent from this EIS.

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
	<p>presence, and visual disturbance would decrease. This could limit disturbance of wildlife and recreationists on BLM lands surrounding the Don Plant and could increase direct and indirect nonmarket values associated with improved recreational experiences in the area and enhanced habitat for wildlife, resulting in long-term, beneficial effects.</p> <p>A potential closure of the plant under the No Action Alternative would have a long-term, negative effect on the economy of the SESA.</p> <p><i>Minority and Low-Income Populations:</i> Under the No Action Alternative, minority and low-income populations within the SESA would continue to experience disproportionately high adverse impacts. The two block groups in Power County and two block groups in the Fort Hall Reservation would continue to experience high levels of exposure to ozone, lead paint, Superfund proximity, and wastewater discharge.</p> <p>Cumulative Effects: The cumulative effects under the No Action Alternative would be similar to the direct and indirect effects under the No Action Alternative, as described above. If Simplot is unable to develop a feasible alternative strategy for gypsum disposal under the No Action Alternative, the existing gypsum stack is projected to reach design capacity by 2031.</p>	<p>Cumulative Effects: Total capital expenditures under the Proposed Action would be approximately \$221,158,750. Operations and maintenance expenditure would also increase by approximately \$2.25 million. This direct spending has a multiplier effect on the surrounding economic region. Increased employment associated with any new construction could increase the population of the SESA and affect housing, public services, or other quality-of-life issues.</p> <p>The Proposed Action and reasonably foreseeable development of the gypsum stacks and the cooling ponds would support approximately 3,763 total jobs, generate approximately \$172.7 million in labor income, and contribute approximately \$768.3 million in industry activity annually across the region. Continued operation of the Don Plant would extend the annual jobs economic impact compared to the No Action Alternative.</p> <p>The Federal lands currently support an estimated \$2,852.50 (70 x \$40.75) annually of direct economic value. This economic value from livestock grazing would be forgone under the Proposed Action because the Federal lands would no longer be available for livestock grazing. Federal acquisition of the non-Federal lands would ensure the availability of the lands for livestock grazing and estimated annual generation of \$1,813.38 in direct economic value through livestock grazing. The net effect of the Proposed Action on economic value generated by livestock grazing would be an annual loss of approximately \$1,039.12.</p> <p>Reasonably foreseeable development of the Federal lands could result in direct use impacts on nonmarket values by expanding the industrial character of lands within the existing Don Plant property to adjacent, undeveloped lands. Conversion of these lands to a more industrial landscape would diminish the recreational setting and opportunities in the area, such as off-highway vehicle use, mountain biking, horseback riding, wildlife viewing, sightseeing, hunting, and camping.</p> <p><i>Minority and Low-Income Populations:</i> Under the Proposed Action, minority populations within the SESA would continue to experience disproportionately high adverse impacts. The two block groups in Power County and two block groups in the Fort Hall Reservation would continue to experience high levels of exposure to ozone, lead paint, Superfund proximity, and wastewater discharge.</p> <p>The reasonably foreseeable actions on the Federal lands would result in incremental increases in concentrations of contaminants in groundwater, which is connected to surface water resources that are important to minority populations within the SESA; however, the estimated magnitude of effects on water quality resulting from the reasonably foreseeable actions, including leakage of mercury, arsenic, and phosphorus, described in Section 3.17 (<i>Water Resources</i>), are not anticipated to adversely affect fisheries that are utilized by the Shoshone-Bannock Tribes relative to baseline water quality conditions and declining trends in total concentrations of various contaminants from ongoing application of source controls and remedial actions at the Don Plant. Current fish consumption advisories for the Portneuf River and the American Falls Reservoir would remain in effect as long as deemed necessary by the Idaho Department of Health and Welfare.</p>	<p>approximately 200 acres of irrigated agricultural lands and approximately 750 acres of improved rangeland.</p> <p>Alternative A would not create disproportionately high and adverse human health or environmental effects on minority populations in the SESA.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Cumulative Effects: Same as Proposed Action, except the absence of the west canyon gypsum stack expansion would move the source of fluoride and particulate matter emissions farther from the Fort Hall Reservation, although it would be closer to residences east of the Don Plant. As under the Proposed Action, the overall reduction in fluoride and particulate matter emissions from construction of the cooling ponds is anticipated to negate the effects of moving the source of the emissions.</p>

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CHAPTER 1. INTRODUCTION

The Bureau of Land Management (BLM) Pocatello Field Office is the lead agency preparing an Environmental Impact Statement (EIS) for the proposed Blackrock Land Exchange in Power and Bannock Counties, Idaho. The intent of the National Environmental Policy Act (NEPA) process is to analyze and disclose potential environmental consequences of the Proposed Action—the Blackrock Land Exchange—and reasonable alternatives, enabling public officials to make a well-informed decision.

This chapter summarizes the Proposed Action, provides relevant background information to provide context for the Proposed Action, states the purpose and need for the Proposed Action, and gives an overview of the environmental review and decision-making process. It also evaluates whether the action would conform to the existing land use plan and identifies supplemental authorities and approvals that would be required to implement the Proposed Action.

1.1 Summary of the Proposed Action

The Proposed Action is a land exchange—referred to as the Blackrock Land Exchange—wherein the J.R. Simplot Company (Simplot) proposes to acquire 719 acres of Federal land managed by the BLM adjacent to Simplot’s Don Plant manufacturing site in Power and Bannock Counties, Idaho, (i.e., Federal lands) in exchange for 667 acres of non-Federal land owned by Simplot in the Blackrock and Caddy Canyon areas in Bannock County approximately 5 miles southeast of Pocatello, Idaho (i.e., non-Federal lands). Appendix C, Map 1, depicts the lands proposed for exchange. Chapter 2 (*Proposed Action and Alternatives*) provides a detailed description of the Proposed Action, No Action Alternative, other action alternatives carried forward for analysis, and alternatives considered but eliminated from further analysis.

Simplot has indicated its intent to use the acquired Federal lands for construction of cooling ponds to implement legally enforceable controls described in Section 1.2.2 (*Site Information and Environmental Requirements*) and to maximize the operational life of its ongoing phosphate processing operations at the Don Plant by expanding gypsum stacks onto adjacent land (Appendix C, Map 6). As is the case with any transfer of land out of Federal ownership, the BLM must assume that the transferred lands will be managed in conformance with all applicable statutes, regulations, and rules governing the actions and/or inactions of private, local, State, tribal, and Federal interests that acquire jurisdiction in some capacity over said lands. Consistent with the memorandum decision of the U.S. District Court for the District of Idaho (*Shoshone-Bannock Tribes of Fort Hall Reservation v. United States Department of the Interior et al.*, 2011), this EIS fully considers potential indirect and cumulative effects of the intended uses of the Federal lands based on conceptual site plans developed by Simplot (HDR, Inc. 2018). Refer to Section 2.1.3 (*Reasonably Foreseeable Actions on the Lands Proposed for Exchange*) for a description of the intended future uses of the Federal and non-Federal lands.

1.2 Background

1.2.1 Land Exchange History

In 1994, Simplot submitted a land exchange proposal to the BLM Pocatello Field Office to acquire public lands adjacent to the Don Plant. The Don Plant processes phosphate ore to manufacture phosphate fertilizer and feed phosphates. Simplot indicated its intent to use the acquired Federal lands as a potential future waste disposal area for the gypsum by-product from fertilizer manufacture known as phosphogypsum. The BLM initially began preparing an Environmental Assessment (EA) to analyze

impacts of the proposed land exchange in 1996. The land exchange proposal was subsequently put on hold until Simplot renewed talks with the BLM Pocatello Field Office in 2002. Simplot identified additional Federal and non-Federal lands for exchange, ultimately proposing to acquire 719 acres of Federal land managed by the BLM in exchange for 667 acres of non-Federal land owned by Simplot—the same lands being evaluated under the current Proposed Action.

The BLM subsequently prepared an EA to analyze the proposed land exchange (BLM 2007a) and issued a Decision Record and Finding of No Significant Impact approving the land exchange in December 2007 (BLM 2007b). The Shoshone-Bannock Tribes challenged the BLM's decision in the U.S. District Court for the District of Idaho, alleging that the BLM was obligated to prepare an EIS under the requirements of NEPA. In May 2011, the Court granted the Shoshone-Bannock Tribes' motion and remanded the Decision Record and Finding of No Significant Impact to the BLM, ordering the agency to prepare an EIS (*Shoshone-Bannock Tribes of Fort Hall Reservation v. United States Department of the Interior et al.*, 2011).

Since the court's decision in 2011, Simplot has expanded its gypsum operations and added lined compartments for receiving gypsum, leachate collection systems, and lined decant ponds. This design, construction, and operational experience has provided Simplot with information pertinent to the reasonably foreseeable development of gypsum stack expansion onto the acquired Federal lands, which responds to specific questions raised in the court decision, including: (1) the amount of waste that would be disposed of in the canyon south of the Don Plant; (2) preparation needed for waste disposal; (3) the type of liner; (4) installation of the liner in the canyon terrain; and (5) information related to groundwater flows under the canyon. Refer to Appendix E (*Feasibility Study*)¹ for additional information on preliminary design, construction, and operation of the reasonably foreseeable actions.

1.2.2 Site Information and Environmental Requirements

Simplot's Don Plant, as well as the adjacent FMC plant, were both constructed in the 1940s. Concerns over groundwater quality in the area west of Pocatello (known as the Eastern Michaud Flats [EMF]) resulted in an environmental investigation associated with operations of the Don Plant and the nearby elemental phosphorus manufacturing facility operated by FMC Corporation. The FMC plant closed in 2001, while the Don Plant has continued to operate to the present day. In 1998, pursuant to the Comprehensive Environmental Response Compensation and Liability Act, these facilities and the surrounding EMF were designated a Superfund site (EPA 1998). Contaminants of concern were identified in groundwater, soils, and vegetation surrounding the site. A portion of the Federal land proposed for exchange is an area identified in the U.S. Environmental Protection Agency's (EPA's) 1998 Record of Decision for remedial actions as part of the "Off-Plant Operable Unit" of the EMF Superfund Site.

In 2001, the EPA issued a consent decree (*United States of America v. FMC Corporation, and J.R. Simplot Company*, 2001) and statement of work (EPA 2001) specific to the Simplot Operable Unit of the EMF Superfund Site, which encompassed the area immediately surrounding the Don Plant. At that time, the existing gypsum stack was unlined; the statement of work required Simplot to install a groundwater extraction system to remove groundwater contaminated by the (then) unlined stack, which was then used by Simplot for Don Plant production operations. Subsequently, it was determined that a synthetic

¹ *The Feasibility Study was developed by Simplot to evaluate project needs for Don Plant Operations. The study was made available to the BLM to provide technical information about reasonably foreseeable actions. The participation of other Federal and State regulatory agencies in the preparation of this EIS does not imply their concurrence with the recommendations found in the Feasibility Study.*

liner could be placed on top of the existing gypsum stack. The 2001 Consent Decree was amended in 2010 to include placing a liner on the gypsum stack (*United States of America v. FMC Corporation, and J.R. Simplot Company*, 2010). This requirement is consistent with a 2008 Voluntary Consent Order that Simplot entered into with the Idaho Department of Environmental Quality (IDEQ), which required installation of a synthetic liner on the existing gypsum stack to reduce seepage and loading of phosphorus and associated contaminants to groundwater, which discharges to the Portneuf River (IDEQ 2008a). The Voluntary Consent Order also requires the inclusion of a liner in the design of any new gypsum stack built at the Don Plant or other lands acquired for that purpose. Simplot completed the lining of the existing gypsum stack ponded areas in November 2017. Since that time, all gypsum placed on the gypsum stack has been underlain by a high-density polyethylene liner. Gypsum wastewater decanting from the gypsum stack is captured in a lined drain system and placed in a lined “decant” pond for reuse in the phosphoric acid manufacturing process.

In 2015, the EPA and U.S. Department of Justice reached a settlement with Simplot to resolve alleged Clean Air Act violations at five Simplot facilities, including the Don Plant (*United States of America, State of Idaho, and San Joaquin Valley Air Pollution Control District v. J.R. Simplot Company*, 2015). Under the terms of the settlement, Simplot was responsible for paying a civil penalty and installing pollution controls and monitoring systems to reduce public health risks associated with sulfur dioxide emissions.

In 2016, the IDEQ and Simplot agreed to a Consent Order to address the exceedances of fluoride in forage standards within an approximately 1- to 2-mile radius of the Don Plant (IDEQ 2016). The 2016 Consent Order requires that Simplot reduce fluoride emissions by 2026 through one of the following options: replace the existing reclaim cooling towers with a low-emission alternative, or incorporate measures that reduce fluoride emissions by more than 50 percent from the reclaim cooling towers to demonstrate compliance with fluoride in forage standards.

1.3 Purpose and Need

The BLM’s purpose is to evaluate the land exchange proposal. If approved, the proposal would improve resource management in an area containing crucial mule deer winter range and secure permanent public access within a popular recreation area in accordance with the *Record of Decision and Pocatello Field Office Approved Resource Management Plan* (Pocatello RMP) (BLM 2012). The BLM’s need is to respond to the proposal pursuant to the Federal Land Policy and Management Act of 1976 (FLPMA), as amended.

Simplot’s purpose for the proposed land exchange is to implement legally enforceable controls as directed by the EPA and IDEQ, as described in Section 1.2.2, *Site Information and Environmental Requirements*.² To meet fluoride reduction requirements of the IDEQ’s 2016 Consent Order, Simplot has proposed construction of cooling ponds adjacent to the Don Plant, which would require the acquisition of adjacent Federal lands. Additionally, this acquisition would allow Simplot to maximize the operational life of its ongoing phosphate processing operations at the Don Plant by expanding gypsum stacks onto adjacent land.

² If the land exchange is approved, the IDEQ shall review and approve the designs and supporting documentation for any new gypsum stacks and cooling ponds, in accordance with the aforementioned 2008 and 2016 Consent Orders between Simplot and IDEQ (IDEQ 2008a, 2016). Information required to fulfill the requirements of these Consent Orders will likely be more detailed and may differ from information provided to the BLM for purposes of the Blackrock Land Exchange EIS.

1.4 Decision to be Made

The BLM will decide whether to authorize the proposed land exchange and, if so, under what terms and conditions, as described in *Land Exchange Handbook H-2200-1* (BLM 2005; Chapter 10, Section D). This decision will be made through consideration of the results of this EIS analysis conducted under NEPA and other applicable Federal, State, or local requirements.

1.5 Environmental Review Process

The BLM published a Notice of Intent to prepare an EIS for the proposed Blackrock Land Exchange in the *Federal Register* on May 20, 2019 (84 FR 22893). This initiated the 45-day public scoping period for the EIS, during which the BLM actively solicited input from the public and other Federal, State, tribal, and local entities on the issues, impacts, analysis methods, and potential alternatives that would be addressed in the Blackrock Land Exchange EIS. Refer to Section 1.8.2 (*Public Scoping*) and Chapter 4 (*Consultation and Coordination*) of this EIS for additional information on the public scoping process and other consultation and coordination with Federal agencies, tribes, and other stakeholders.

In consideration of input provided during scoping and ongoing coordination with cooperating agencies, the BLM prepared a draft EIS for public review. Publication of a Notice of Availability in the *Federal Register* on December 20, 2019, announced the beginning of the 45-day public comment period for the draft EIS. The BLM considered and responded to all substantive written comments submitted during the public comment period for the draft EIS, then began preparing the final EIS. Appendix I (*Draft EIS Comments and Responses*) lists all substantive comments on the draft EIS and the BLM's responses.

No sooner than 60 days after the notice of availability for this Final EIS was published in the *Federal Register*, the BLM will prepare a Record of Decision to document the selected alternative and identify any accompanying mitigation measures. The Record of Decision is scheduled to be released in July 2020.

1.6 Land Use Plan Conformance

All actions approved or authorized by the BLM must conform to the existing land use plan (43 Code of Federal Regulations [CFR] 1610.5-3, 516 Department Manual 11.5), in this case the Pocatello RMP (BLM 2012). If proposed actions are not in conformance with the existing land use plan, an amendment or modification to the land use plan may be required. The BLM conducted a land use plan conformance assessment and prepared a land use plan conformance report (BLM 2019a), which determined that the Proposed Action for the Blackrock Land Exchange EIS conforms to the management decisions in the Pocatello RMP.

In particular, Action LR-5.2.1 of the Pocatello RMP (BLM 2012) identifies lands potentially suitable for disposal by exchange, which include the Federal lands. Additionally, the purpose and need for the land exchange meet the screening criteria in Action LR-5.1.3 used to determine whether a proposed land tenure adjustment would meet the intent of FLPMA and serve the public interest. The Proposed Action would also meet specific factors for land acquisition and disposal in Action LR-5.2.3, including "Improve or maintain access" and "Improves quality of recreation opportunities and/or experiences" (BLM 2012). As required by Actions LR-5.1.6 and LR-5.1.10, the BLM has engaged in government-to-government consultation with the Shoshone-Bannock Tribes regarding potential effects of the Proposed Action on tribal treaty rights and tribal resources.

1.7 Supplemental Authorities and Approvals

In addition to NEPA, as amended (42 United States Code [U.S.C.] 4321 et seq.), this EIS has been prepared in accordance with other supplemental authorities, including but not limited to:

- Federal Land Policy and Management Act, as amended (43 U.S.C. 1701 et seq.)
- Clean Air Act, as amended (42 U.S.C. 7401 et seq.)
- Endangered Species Act, as amended (16 U.S.C. 1531)
- National Historic Preservation Act, as amended (16 U.S.C. 470)
- American Indian Religious Freedom Act, as amended (42 U.S.C. 1996)
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, February 11, 1994
- Migratory Bird Treaty Act, as amended (16 U.S.C. 703–711), and Executive Order 13186, Migratory Birds, January 10, 2001
- Executive Order 13112, Invasive Species, February 3, 1999
- Resource Conservation and Recovery Act, as amended (42 U.S.C. 6901 et seq.)
- Comprehensive Environmental Response, Compensation, and Liability Act, as amended (42 U.S.C. 9615)
- Secretarial Order 3373, Evaluating Public Access in BLM Public Land Disposals and Exchanges, March 21, 2019

The Blackrock Land Exchange would be implemented in accordance with the *Land Exchange Handbook H-2200-1* (BLM 2005), including review of all encumbrances on the Federal and non-Federal lands authorized as rights-of-way, leases, permits, easements, or other interests. In addition, Simplot's future construction and operation of the reasonably foreseeable actions on the acquired Federal lands would require appropriate permits, licenses, and/or compliance with all existing State and Federal Consent Orders. Because these future permits and licenses are associated with reasonably foreseeable future development and not the Proposed Action of the land exchange, they are not identified in this chapter.

1.8 Scoping and Issues for Analysis

The BLM conducted internal and public scoping for the Blackrock Land Exchange EIS to identify data sources, inform the development of a range of reasonable alternatives, define the scope of analysis for the EIS, identify resource issues for detailed analysis, and solicit other information to be used in the development of the EIS.

1.8.1 Internal Scoping

The BLM conducted internal scoping for the EIS during a BLM Interdisciplinary (ID) Team meeting on March 12, 2019. Additional discussions and input received from the BLM ID Team also informed the internal scoping process. The BLM documented ID Team input as shown in Appendix D, *BLM ID Team Checklist*, which identifies those resources that are present and could be affected by the Proposed Action, and those resources that are either not present or that would not be affected, with supporting rationale.

1.8.2 Public Scoping

The formal public scoping period for the Blackrock Land Exchange EIS began on May 20, 2019, with the publication of a Notice of Intent in the *Federal Register* (84 FR 22893). The BLM invited the public to submit comments within the 45-day public scoping period from May 20 through July 5, 2019; 26 comment document submissions were received. The BLM hosted two public scoping meetings during the public scoping period on June 12 and 13, 2019. Refer to the *Blackrock Land Exchange EIS Scoping Report* (BLM 2019b) for more information on the scoping process and results.

1.8.3 Issues for Analysis in the EIS

Based on the results of internal and public scoping, the BLM carried forward the following resource categories for detailed analysis in the EIS.

- Air Quality and Climate Change
- Biological Resources
 - Vegetation
 - Fish and Wildlife
 - Special Status Species
 - Wetlands and Riparian Zones
- Cultural Resources
- Tribal Treaty Rights, Trust Responsibilities, and Tribal Resources
- Geotechnical Stability
- Hazardous or Solid Wastes
- Lands and Realty
- Geology and Paleontology
- Public Health and Safety
- Recreation
- Visual Resources
- Livestock Grazing
- Soils
- Water Resources
- Socioeconomics and Environmental Justice

Refer to Appendix D, *BLM ID Team Checklist*, for an explanation of resource categories not carried forward for detailed analysis.

CHAPTER 2. PROPOSED ACTION AND ALTERNATIVES

This chapter describes the Proposed Action and alternatives for the Blackrock Land Exchange EIS, including intended future uses of the lands proposed for exchange. As is the case with any transfer of land out of Federal ownership, the BLM must assume that the transferred lands will be managed in conformance with all applicable statutes, regulations, and rules governing the actions and/or inactions of private, local, State, tribal, and Federal interests that acquire jurisdiction in some capacity over said lands. This chapter also identifies alternatives that the BLM considered but eliminated from detailed analysis and a summary comparison of the alternatives and their environmental effects.

2.1 Proposed Action

2.1.1 Lands Proposed for Exchange

The Proposed Action is a land exchange, wherein Simplot proposes to acquire 719 acres of Federal lands managed by the BLM adjacent to Simplot's Don Plant in exchange for 667 acres of non-Federal lands owned by Simplot. Appendix C, Map 1, depicts the locations of the Federal and non-Federal lands included in the Proposed Action. The Federal lands consist of one full parcel and portions of three additional parcels in Power and Bannock Counties, Idaho (described in Table 2-1 and shown in Appendix C, Map 3). The non-Federal lands comprise nine parcels of private land in the Blackrock and Caddy Canyon areas in Bannock County, approximately 5 miles southeast of Pocatello, Idaho (described in Table 2-2 and shown in Appendix C, Map 4). Section 2.1.3 (*Reasonably Foreseeable Actions on the Lands Proposed For Exchange*) provides a description of planned future uses of the lands following the exchange.

Table 2-1. Description of Blackrock Land Exchange Federal Parcels

County	Legal Description	Parcel ID
Bannock	Township 6 South, Range 34 East Section 17: W½ NW¼, W½ SW¼	No parcel ID (full parcel)
Bannock	Township 6 South, Range 34 East Section 20: NW¼ NW¼	No parcel ID (partial parcel)
Power	Township 6 South, Range 34 East Section 19, lots 2, 3, 4, and 5: N½ NE¼, SW¼ NE¼, SE¼ NW¼, E½ SW¼, W½ SE¼	RPD0419-02 (partial parcel)
Power	Township 6 South, Range 34 East Section 30: N½ NE¼ NW¼, N½ NW¼ NE¼	RPD0419-04 (partial parcel)

Sources: Bannock County 2019; Power County 2019.

Table 2-2. Description of Blackrock Land Exchange Non-Federal Parcels

County	Legal Description	Parcel ID
Bannock	Township 7 South, Range 35 East Section 13: W½ NW¼, NW¼ SW¼, S½ SW¼, SE¼ SE¼	R4013009400 R4013009600 R4013009500
Bannock	Township 7 South, Range 35 East Section 14, Lot 1: E½ SW¼, W½ SE¼, NE½ SE¼ excepting therefrom an approximate 0.46-acre parcel described by Metes and Bounds in Record of Survey recorded as Instrument No. 21915816, Bannock County, Idaho	R4013009900 R4013009700
Bannock	Township 7 South, Range 35 East Section 23: portion of NE¼ NE¼ lying north of the Interstate Freeway (Project 1-15-1 (8) 57 Highway Survey)	R4013036700
Bannock	Township 7 South, Range 35 East Section 24: NE¼ NE¼, and portion of N½ NW¼ lying north of Interstate Freeway (Project I-15-1 (8) 57 Highway Survey). Also a 12.84-acre portion of SE¼ NE¼, as described by Metes and Bounds in Warranty Deed recorded as Instrument No. 20332534, Bannock County, Idaho	R4013043400 R4013043100
Bannock	Township 7 South, Range 36 East Section 7: NE¼ NE¼	R4015002401

Source: Bannock County 2019.

2.1.2 Rights and Interests in the Lands Proposed for Exchange

Simplot is requesting the BLM issue a patent to Simplot for 719 acres of Federal lands. The patent issued to Simplot would include a reservation to the United States of a right-of-way thereon for ditches and canals constructed under the authority of the United States pursuant to the Act of August 30, 1890 (43 U.S.C. 945). The patent would also be subject to the following existing rights-of-way:

- IDI-000148 held by Qwest Corporation for a telephone line authorized under the Act of February 15, 1901
- IDI-001123 held by Union Pacific Railroad for water facilities authorized under the Act of February 15, 1901
- IDI-001449 held by Union Pacific Railroad for water pipeline under various statutes
- IDI-003990 held by Idaho Power Company for a power transmission line under the Act of October 21, 1976
- IDI-022083 held by Simplot for air quality monitoring facility under the Act of October 21, 1976
- IDI-038926 held by Simplot for a geophysical survey under the Act of October 21, 1976

The following existing rights and interests in the non-Federal lands would be inherited by the Federal Government or merge with the acquired title upon execution of the exchange, subject to the warranty deed, and would be administered in accordance with their permitted rights and interests and the Pocatello RMP (BLM 2012):

- Instrument No. 233847 dated October 23, 1944, to the United States of America affecting section 24 of T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho, for the purpose of repairing, renewing, or using a drift fence, or for other business pertaining to the use and maintenance thereof
- Instrument No. 233848 dated October 23, 1944, to the United States of America affecting section 13 & 24 of T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho, for a drift fence

- Instrument No. 653468 granted to Frank D. Rosa and Martha E. Rosa, a 30-foot-wide access road easement affecting section 24 of T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho
- Instrument No. 823202 dated December 20, 1988, granted to the United States of America to locate, construct, use, control, maintain, improve, relocate, and repair a road in section 14 in T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho
- Instrument 402084 dated March 19, 1964 for easements, conditions, restrictions, and access rights contained in the deed to the State of Idaho in section 24 of T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho
- Instrument 408585 dated October 1, 1964 for easements, conditions, restrictions, and access rights contained in the deed to the State of Idaho in sections 23 and 24, T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho

Surface and subsurface mineral rights for both the Federal and non-Federal lands would be transferred in the proposed exchange. The BLM holds two water rights (No. 29-07878 and No. 29-07883) associated with stockwater ponds within the Federal lands, which would be transferred to Simplot through the proposed land exchange. The United States already holds water rights on the non-Federal lands. These water rights would merge with the property conveyed in the warranty deed when the title is accepted.

Approval of this exchange would result in the modification of the Trail Creek cattle allotment on the acquired Federal lands. Robert Swanson for Michaud Creek Ranches, the affected permittee, has been notified of the exchange and signed a waiver regarding the 2-year grazing notification required by regulation at 43 CFR 4110.4-2(b). Therefore, the Federal lands would not be subject to any grazing privileges once exchanged.

2.1.3 Reasonably Foreseeable Actions on the Lands Proposed For Exchange

This section describes reasonably foreseeable actions on the Federal and non-Federal lands under the Proposed Action. These actions and their resulting effects are analyzed as indirect and cumulative effects in Chapter 3, *Affected Environment and Environmental Consequences*. Section 3.2.4 (*Cumulative Effects*) identifies other reasonably foreseeable actions in the region that, when combined with reasonably foreseeable actions on the Federal and non-Federal lands, could result in cumulative effects.

2.1.3.1 Federal Lands

Simplot's purpose and need for the proposed land exchange is provided in Section 1.3, *Purpose and Need*. The land exchange and Simplot's reasonably foreseeable actions on the acquired Federal lands (Appendix C, Map 6) are anticipated to extend the life of the Don Plant for an estimated 65 years. Simplot commissioned a feasibility study to evaluate its intended uses of the acquired Federal lands, including conceptual plans for the cooling ponds and expanded gypsum stack and an assessment of other potential options for meeting fluoride reduction requirements and phosphogypsum disposal needs (HDR, Inc. 2018). Refer to Appendix E (*Feasibility Study*) for additional technical information on the reasonably foreseeable actions. If the land exchange is approved, Simplot would further coordinate with the State of Idaho and other appropriate regulatory agencies to permit the gypsum stack expansions and the cooling ponds on the private land. These authorization decisions would be outside of the BLM's authority.

Table 2-3 summarizes the estimated new surface disturbance from Simplot's reasonably foreseeable actions on the acquired Federal lands and adjacent Simplot lands based on the conceptual facility designs.

Table 2-3. Estimated Surface Disturbance from Simplot's Planned Facilities (Proposed Action and Alternative A)

Feature	Acres of Surface Disturbance		
	<i>Federal Land</i>	<i>Simplot Land</i>	<i>Total</i>
Cooling Pond 1 (including cut and fill extent)	33.5	19.4	53.0
Cooling Pond 2 (including cut and fill extent)	28.3	15.7	44.0
Subtotal: Cooling ponds	61.8	35.1	97.0
East gypsum stack expansion	18.9	26.9	45.8
South gypsum stack expansion	10.3	57.4	67.7
West gypsum stack expansion	92.4	22.6	115.1
Subtotal: Gypsum stacks	121.6	107.0	228.6
200-foot buffer area surrounding all new disturbance to accommodate access roads, utilities, and related infrastructure	106.8	47.0	153.9
Total: All features	290.3	189.1	479.4

Source: Simplot 2019a.

Note: For purposes of analysis, this EIS uses acreages calculated using geographic information system data, which may vary from acreages reported in other documents. Estimates of surface disturbance are based on conceptual designs of the cooling ponds, gypsum stacks, and related infrastructure as described in Appendix E (*Feasibility Study*). Actual disturbance locations would be finalized during final design and permitting and are subject to change based on technological changes, final engineering, Don Plant production, and other factors.

2.1.3.1.1 Replacement of Cooling Towers with Cooling Ponds

Should the BLM approve the Proposed Action, Simplot intends to pursue permitting with the appropriate Federal and State agencies to construct cooling ponds on a portion of the acquired Federal lands (Appendix C, Map 6). As described in Section 1.2.2 (*Site Information and Environmental Requirements*), Simplot entered into a Consent Order with the IDEQ requiring that Simplot reduce fluoride emissions from the Don Plant by either (1) replacing the existing reclaim cooling towers with a low-emission alternative or (2) incorporating measures that provide for greater than 50 percent fluoride emissions reductions from the reclaim cooling towers with demonstration of compliance with the fluoride in forage standards. The feasibility study conducted by Simplot (see Appendix E) identified lined cooling ponds to remove the heat load from the phosphoric acid plant as its preferred approach to meet the requirements (HDR, Inc. 2018). Simplot would transfer the process cooling water to cooling ponds, where water would be cooled and then pumped back to the cooling system for reuse. The cooling ponds would eventually replace the existing cooling towers at the Don Plant, bringing fluoride emissions into compliance with the 2016 Consent Order. Cooling ponds are a primary means of cooling process water at other phosphoric acid plants in the country, and would be a standard industrial installation.

Simplot conducted a series of studies to assess pond size requirements that would allow for the full replacement of the cooling towers. Simplot selected the proposed location for the cooling ponds in the east canyon (Appendix C, Map 6) because it would not impede future gypsum stack expansion and is farther away from public roads, residences, and property boundaries compared to the other sites evaluated (HDR, Inc. 2018). Based on conceptual level design and process water cooling studies (HDR, Inc. 2018), Simplot proposes to construct at least two ponds (Cooling Ponds 1 and 2) east of the existing gypsum stack (Appendix C, Map 6). The cooling ponds would be located on both Simplot and acquired Federal land.

The area required for the cooling ponds would be approximately 80 to 100 acres. The range in area is due to potential design options, including using current gypsum stack ponds for cooling, blending tanks, and other related technologies. This analysis assumes the total new surface disturbance to construct the

cooling ponds would be approximately 97 acres, including 62 acres on the acquired Federal lands, plus additional surface disturbance within an approximately 200-foot buffer area around the ponds for construction of access roads, below-grade process cooling water pipelines, and related infrastructure (see Table 2-3). Based upon the feasibility study conceptual design, Cooling Pond 1 would be approximately 53 acres in size, with a top elevation of 4,837 feet above mean sea level. Cooling Pond 2 would be approximately 44 acres in size, with a top elevation of 4,989 feet above mean sea level. Both cooling ponds would be approximately 10 feet deep.

2.1.3.1.2 Future Gypsum Stack Expansion

Phosphogypsum is a byproduct of the chemical reaction that produces phosphoric acid. Phosphogypsum is mechanically separated from the phosphoric acid at the Don Plant and then mixed with process water for transport to a disposal area located south and southeast of the Don Plant site known as the phosphogypsum (or gypsum) stack. Phosphate rock contains naturally occurring radioactive materials, which are present at higher concentrations in phosphogypsum waste than the original phosphate rock. All uses of phosphogypsum waste are banned under 40 CFR 61 unless the waste has very little radioactivity.

Should BLM approve the Proposed Action, Simplot intends to use a portion of the acquired Federal lands to meet future gypsum disposal needs. Appendix C, Map 6, depicts the existing gypsum stack area at the Don Plant and the proposed lateral gypsum stack expansions onto the acquired Federal lands and lands already owned by Simplot. The existing gypsum stack area occupies approximately 494 acres.

The proposed gypsum stack expansions would be located in the east canyon area near the proposed cooling ponds (east gypsum stack expansion), two small canyon areas south of the existing main gypsum stack area (south gypsum stack expansion), and a large canyon area to the southwest of the main gypsum stack (west gypsum stack expansion) (Appendix C, Map 6). Table 2-3 reports the estimated acreages of new surface disturbance associated with these gypsum stack expansions. In total, the gypsum stack expansions would disturb an estimated 229 acres, including 122 acres on the acquired Federal lands. The analysis assumes additional surface disturbance within an approximately 200-foot buffer area around each gypsum stack expansion for construction of access roads, underground pipelines, and related infrastructure (see Table 2-3 and Appendix C, Map 6).

The conceptual design of the gypsum stack expansions includes a compacted gypsum perimeter containment dike and prepared subgrade (compacted, firm, and smooth graded surface) that is covered with a liner (HDR, Inc. 2018). Final layout and design of the proposed lined gypsum disposal areas is not yet complete, including design details for the required bottom liner. The existing Don Plant gypsum disposal facility uses an inverted composite bottom liner system, which is composed of a 60-millimeter, high-density, polyethylene liner with a compacted or sediment gypsum cover. Inverted composite liner systems are commonly used for gypsum stack systems throughout the world; however, Simplot does not want to rule out the use of other liner options, such as a conventional clay/composite clay liner (18-inch thick soil or clay layer with a maximum hydraulic conductivity of 1×10^{-7} centimeters per second, placed beneath a 60-millimeter or thicker high-density, polyethylene geomembrane liner), a double geomembrane liner system with leak detection, or other potential liner systems that may prove to be viable for the actual site and foundation conditions that may be encountered at each location (Simplot 2019b). The compacted gypsum by itself (without the synthetic liner) is estimated to have an initial maximum hydraulic conductivity of 1×10^{-4} centimeters per second. Any liner approved in the future through State and Federal permitting processes will meet or exceed the impermeability and durability standards of the current liner approved by the IDEQ. Refer to Appendix E (*Feasibility Study*) for additional conceptual design information on the liner system for the proposed gypsum stack expansions.

If the land exchange is approved, the IDEQ will review and approve the designs and supporting documentation for any new gypsum stack in accordance with the aforementioned 2008 and 2016 Consent Orders between Simplot and the IDEQ (IDEQ 2008a, 2016). Information required to fulfill the requirements of these Consent Orders will likely be more detailed and may differ from information provided to the BLM in Appendix E for purposes of the Blackrock Land Exchange EIS.

A compacted gypsum starter dike and inner dike associated with operation of the gypsum slurry rim ditch distribution system are placed on top of the liner, as are concentric stabilization underdrains that are provided beneath the perimeter slope of the future gypsum stack. In lateral expansion areas beyond the exterior limits of the existing gypsum stack, the liner will be placed on the properly prepared natural ground surface. Depending on the particular site geometry, which would be determined through subsequent design phases, the height of perimeter earthen containment dike and initial starter dike for the gypsum stack may vary. Construction of the gypsum stack expansion would take place in phases, including construction of the earthen perimeter dike construction, site preparation, and lining of the exposed slopes of the disposal facilities.

The gypsum stack would be operated using a wet slurry technique, where gypsum filter cake is removed from the plant belt filters, slurried with recycled process water, and pumped to a designated settling compartment on top of the lined gypsum stack area. The solids are allowed to settle in clarification ponds maintained on top of the stack, and the clarified process water (slurry water) is decanted or pumped back to the plant for reuse in subsequent operations. The gypsum stack is operated and gradually raised using the upstream method of construction, in conjunction with a perimeter rim-ditch method of slurry distribution within the various clarification ponds. With this method, the settled gypsum deposits on top of the stack are periodically excavated from the perimeter rim-ditch system and used as fill to incrementally raise the perimeter containment dike and inner berm of the rim-ditch system.

2.1.3.1.3 Construction and Operation Schedules

Actual timing of the construction of the cooling ponds and expansion of the gypsum stack would be contingent upon the permitting and approvals required by the appropriate State and Federal agencies following the issuance of a Record of Decision (after the NEPA process is complete), and after a title transfer/closing phase. Construction of the cooling ponds and expansion of the gypsum stacks would occur simultaneously and construction activities would generally occur during daylight hours between 6:00 a.m. and 7:00 p.m. Mountain Time. Phase 1 for construction of the cooling ponds and gypsum stack expansion would last an estimated 36 months and would include initiating excavation and other activities for construction of the cooling ponds and incremental liner extensions for the expanded gypsum stacks in the east and south canyon areas. Subsequent construction phases would be dependent upon phosphate production, availability of capital funding, and other factors. Table 2-4 provides the anticipated in-service and out-of-service dates for the gypsum stack expansions and the cooling ponds.

Table 2-4. Estimated Service Dates for the Reasonably Foreseeable Actions

Feature	In-Service Date	Out-of-Service Date
East gypsum stack expansion	10/1/2025	10/1/2084
South gypsum stack expansion	10/1/2025	10/1/2084
West gypsum stack expansion	10/1/2040	10/1/2084
Cooling ponds	1/1/2025	10/1/2084

Source: Formation Environmental 2019a (included in this EIS as Appendix H, *Water Resource Technical Report*).

Note: The service dates are based on current information and subject to modification based on production needs, market factors, availability of capital funding, and other factors.

2.1.3.1.4 Workforce

In fiscal year 2017, the Don Plant and associated Frontier building employed 386 full-time workers (Simplot 2019d). Simplot anticipates that the Don Plant and associated facilities would continue to employ approximately the same number of workers for the foreseeable future. Additional employment would be generated through Simplot's capital expenditures for construction of the cooling ponds and gypsum stack expansions, as described in Appendix G, *Socioeconomic Technical Report*.

2.1.3.1.5 Vehicle Access and Traffic

The Don Plant is located on the south side of U.S. Highway 30, less than 0.5 mile south of its junction with Interstate 86 (Appendix C, Map 6). The Frontier building is located on the north side of U.S. Highway 30, opposite the Don Plant. Access to the Don Plant is typically from U.S. Highway 30.

An estimated 300 annual average daily vehicle trips support current operations at the Don Plant and Frontier building. Simplot does not anticipate that the annual average daily vehicle trips would change during construction and operation of the cooling ponds and gypsum stack expansions. Vehicular access to the Don Plant would also remain the same; however, new access roads would be constructed and maintained around the cooling ponds and gypsum stack expansions within the areas estimated in Table 2-3 and shown on Appendix C, Map 6.

2.1.3.1.6 Utilities

To support construction and operation of the cooling ponds and gypsum stack expansions, Simplot would install and maintain various supporting utilities. At this time, Simplot anticipates installing electrical powerlines, communication lines, pipelines, and lighting within a corridor averaging approximately 200 feet in width surrounding the cooling ponds, as indicated in Table 2-3 and shown on Appendix C, Map 6.

The Don Plant consumes an estimated average of 160,000 megawatt-hours of electricity per year, but also produces an estimated 60,000 megawatt-hours per year, which accounts for approximately 38 percent of the electrical consumption at the Don Plant. Operation of the cooling ponds and related infrastructure is expected to increase electrical consumption by an estimated 40,000 megawatts per year.

2.1.3.1.7 Water Use

Water input into the process water cooling system at the Don Plant comes from fresh water pumped from onsite wells, water pumped from the remedial groundwater extraction well system, and water

pumped from the slurried phosphate ore piped to the Don Plant from Simplot's Smoky Canyon Mine in southeast Idaho. The estimated annual volume of fresh water used at the Don Plant is one billion gallons, with all of the fresh water being sourced from onsite fresh water supply wells.

The land exchange and development of the reasonably foreseeable actions on the acquired Federal lands would extend the life of the Don Plant, resulting in a corresponding extension of water extraction from the water supply wells. However, Simplot does not expect annual pumping rates to increase during the extended life of the Don Plant.

Refer to Appendix H (*Water Resource Technical Report*) for additional information on the groundwater well extraction system at the Don Plant.

2.1.3.1.8 Closure and Reclamation

If the Proposed Action land exchange is approved, Simplot estimates that the operational life of the expanded gypsum stack system would be approximately 65 years, with expansion areas starting operation incrementally. However, the actual life of the gypsum stack would depend on many factors during its operation that are uncertain at this time, including facility production rates, gypsum compression and compaction characteristics, and final stack geometry.

Simplot anticipates submitting an application for closure to the appropriate agencies (i.e., the State of Idaho and the EPA) prior to partial or final closure. In addition, in accordance with Simplot's Voluntary Consent Order with the IDEQ, at least a preliminary closure plan must be submitted for IDEQ approval prior to the start of construction for any new gypsum stack (Voluntary Consent Order/Compliance Agreement Section 5(h)) (IDEQ 2008a). The application would include a final closure plan addressing the following performance standards, which would be subject to IDEQ and EPA approval:

- Controlling, minimizing, or eliminating post-closure release of phosphogypsum wastewater
- Detecting, collecting, and removing phosphogypsum wastewater efficiently from stack system and promoting drainage of wastewater from the gypsum stack
- Compatibility with any required groundwater or surface water corrective action plan
- Minimizing the need for further maintenance

Simplot anticipates that during the first 12 to 13 years of closure, phosphogypsum water would be evaporated from the top of the gypsum stacks. Following this period, phosphogypsum water that drains (decants) from the stack would be treated and the treated water would be placed in a lined cell on top of the gypsum stack to evaporate. Simplot anticipates that this drainage and treatment process would last for several decades post-closure. Stormwater and other surface water that mixes with the leachate would be treated as leachate. A formal closure plan for the gypsum stacks will be required by the IDEQ and EPA and the details of closure will be subject to applicable agency-specific guidance, Consent Orders, and other requirements.

As the amount of phosphogypsum wastewater decreases, physical closure of the stack would commence. Final closure of the gypsum stack would involve placement of a cover over the entire stack surface, including stack components (such as cooling ponds and water conveyance ditches). The cover would include a protective soil layer that can be vegetated to control erosion, underlain by a low-permeability liner. The low-permeability liner may consist of synthetic membranes, soils, or chemically or physically amended soils or gypsum that meet low-permeability gradient requirements. The top gradient of the cover would be designed to prevent or minimize ponding or low spots, infiltration and erosion, and post-closure release of phosphogypsum wastewater. Closure design and subsequent

construction and quality assurance programs would be approved by appropriate Federal and State regulatory authorities.

2.1.3.2 Non-Federal Lands

BLM acquisition of the non-Federal lands included in the land exchange (Appendix C, Maps 1 and 4) would consolidate the BLM's land administration in an area containing crucial mule deer winter range and secure additional public access within popular recreation areas in accordance with the Pocatello RMP (BLM 2012). If the land exchange is approved, the BLM would manage the acquired non-Federal lands in a manner consistent with adjacent or nearby public lands, as specified in the Pocatello RMP (BLM 2012). Key management decisions that the BLM would apply to the non-Federal lands include:

- Lands would be available for exercising off-reservation tribal treaty rights including gathering, hunting, fishing, and practicing tribal cultural activities.
- Wildlife habitats would be maintained and improved to meet BLM and Idaho Fish and Game management objectives, including mule deer habitat.
- Lands would be managed consistent with Visual Resource Management (VRM) Class III and IV objectives.
- Legal public access to public lands would be established for recreation and other uses, specifically for designated routes T0351, T0352, and 0324, where the routes traverse the non-Federal lands. Access for non-motorized and non-mechanized recreational activities would be available from Blackrock Canyon Road (Instrument No. 823202), Route T0351, Route T0352, and Route 0324 where the routes intersect the non-Federal lands.
- Inherited rights-of-way would be managed consistent with their original intended purposes and in accordance with the Pocatello RMP (BLM 2012).
- Mineral estate would be managed consistent with the minerals management decisions in the Pocatello RMP (BLM 2012).
- Lands would be managed as part of the Pocatello Special Recreation Management Area (SRMA) and Blackrock Recreation Management Zone (RMZ) to maintain or enhance targeted recreational opportunities, experiences, and benefits.
- The BLM would develop a 5-year plan to determine needed vegetation and weed treatments, pursue funding, and implement vegetation and weed treatments. Treatments would likely involve BLM staff chemically treating noxious weeds within the non-Federal land using utility terrain vehicles. The BLM would also pursue cooperative agreements with Bannock County for treatment of noxious weeds within the non-Federal and adjacent BLM-administered lands.

Refer to the Pocatello RMP (BLM 2012) for additional management decisions that would apply to the non-Federal lands upon acquisition by the BLM.

2.2 Alternative A – Increased Non-Federal Land Acreage (including Voluntary Mitigation and Donation Parcels)

Alternative A was developed based on comments received during scoping to consider a land exchange that results in a net gain of public lands and makes additional lands available for tribal uses. Alternative A includes the same area of Federal and non-Federal lands as the Proposed Action, with the addition of voluntary mitigation Parcel A offered by Simplot. For Alternative A, the acreage of Federal lands included in the land exchange would be the same as under the Proposed Action (719 acres); however,

the acreage of non-Federal lands that the BLM would acquire in the land exchange would increase to 827 acres, representing a net gain of approximately 108 acres of non-Federal lands that the BLM would acquire. The lands proposed for exchange under Alternative A are shown in Appendix C, Map 2, and in greater detail in Maps 3, 4, and 5.

The additional acreage of non-Federal lands would include 160 acres of Simplot-owned land in the Blackrock Canyon area that would be acquired by the BLM, hereafter referred to as voluntary mitigation Parcel A (described in Table 2-5 and shown in Appendix C, Map 4). Inclusion of voluntary mitigation Parcel A as part of the land exchange would:

- Transfer an additional 160 acres of non-Federal lands into BLM administration (voluntary mitigation Parcel A), resulting in a total of 827 acres of land that the BLM would acquire in the land exchange, representing a net gain of 108 acres.
- Increase the acreage of non-Federal lands that the BLM would acquire and manage consistent with adjacent lands as described in the Pocatello RMP (BLM 2012), including managing an additional 160 acres as part of the Pocatello SRMA and Blackrock RMZ.
- Improve existing public access and provide additional opportunities for public access to the Chinese Peak/Blackrock Trail system, and provide legal access for designated routes 0319 and T0354 where the routes cross voluntary mitigation Parcel A. Access for non-motorized and non-mechanized recreational activities would be available from the routes where they cross voluntary mitigation Parcel A.
- Transfer 26 acres of non-Federal lands into BLM administration within the Blackrock Canyon big game winter range as identified by the Pocatello RMP (BLM 2012).

Table 2-5. Description of Voluntary Mitigation Parcel A

County	Legal Description	Parcel ID
Bannock	Township 7 South, Range 36 East Section 6: SE¼NW¼, SW¼NE¼, NW¼SE¼, NE¼SW ¼	R4015002300

Source: Bannock County 2019.

Simplot has also offered for donation approximately 950 acres of private property within the Fort Hall Reservation boundary—hereafter referred to as voluntary donation Parcel B (Appendix C, Map 5)—to the Secretary of Interior Bureau of Indian Affairs (BIA) for the benefit of the Shoshone-Bannock Tribes or to the Shoshone-Bannock Tribes directly, provided the land exchange is approved and any administrative or judicial appeals have been resolved.¹ If accepted, conveyance of voluntary donation Parcel B would consolidate land ownership on the Fort Hall Reservation and make additional lands available to tribal uses. The 950 acres of land that would be offered for donation include:

- Approximately 200 acres of irrigated agricultural lands that could be incorporated into the tribal Agricultural Resource Management program.
- Approximately 750 acres of improved rangeland within the Fort Hall Reservation, which may provide areas for livestock grazing, access to riparian areas along certain segments of Michaud Creek, and other uses.

¹ The BLM's action to approve the land exchange is not contingent upon the conveyance of voluntary donation Parcel B. This is because this donation would not come to BLM, but would instead go to another entity.

2.2.1 Reasonably Foreseeable Actions on the Lands Proposed For Exchange

Reasonably foreseeable actions and intended uses of lands included in the exchange would generally be the same as under the Proposed Action (Appendix C, Map 6); however, the additional acreage of non-Federal lands would be administered and used as summarized in the description of Alternative A above.

2.3 Alternative B – Avoiding the West Canyon (Preferred Alternative)

Alternative B is the BLM’s preferred alternative. It was developed based on comments received during scoping to adjust the boundary of the Federal lands to avoid cultural and tribal resources in the west canyon area on the north side of Howard Mountain. Like Alternative A, Alternative B would result in a net gain of public lands and make additional lands available to tribal uses. Alternative B includes the same area of non-Federal lands as described under Alternative A, which includes voluntary mitigation Parcel A and voluntary donation Parcel B; however, the Federal lands that would be acquired by Simplot were reconfigured to eliminate the west canyon area from the land exchange (described in Table 2-6 and shown in Appendix C, Map 3). As voluntary mitigation for conveyance of National Register of Historic Places (NRHP)-eligible Site 10PR979 out of Federal administration under Alternative B, Simplot proposes to contribute \$25,000 to the Shoshone-Bannock Tribes’ Language Program.²

For Alternative B, the acreage of Federal lands included in the land exchange would be 711 acres.³ The acreage of Federal lands included in the land exchange would be approximately 8 fewer acres than for the Proposed Action and Alternative A. The lands proposed for exchange under Alternative B are shown in Appendix C, Map 2, and in greater detail in Maps 3, 4, and 5.

Table 2-6. Description of Blackrock Land Exchange Federal Parcels for Alternative B

County	Legal Description	Parcel ID
Bannock	Township 6 South, Range 34 East Section 17: lots 3 and 4, SW¼NW¼, W½SW¼ Tract 44a	No parcel ID (full parcel)
Bannock	Township 6 South, Range 34 East Section 17: SW¼SE¼	No parcel ID (full parcel)
Bannock	Township 6 South, Range 34 East Section 20: W½NE¼, NW¼, N½NE¼SW¼, N½NW¼SW¼ and N½NW¼SE¼	No parcel ID (partial parcel)
Power	Township 6 South, Range 34 East, Section 19: lot 5, NE¼, N½NE¼SE¼ and NE¼NW¼SE¼	Parcel PRD04 19-02 (partial parcel)

Sources: Bannock County 2019; Power County 2019.

Inclusion of voluntary mitigation Parcel A and voluntary donation Parcel B would have the same results on non-Federal lands included in the exchange and their administrative entities as identified under Alternative A. Reconfiguration of the Federal lands proposed for exchange in Alternative B would:

² The BLM’s action to approve the land exchange is not contingent upon Simplot’s contribution of \$25,000 to the Shoshone-Bannock Tribes’ Language Program.

³ For purposes of analysis, this EIS uses an acreage for the Alternative B Federal lands that was calculated using geographic information system data, which may vary from acreages reported in other documents.

- Result in BLM retention of 368 acres of Federal lands in the west canyon area that the BLM would continue to manage in accordance with the Pocatello RMP (BLM 2012), including identified cultural and tribal resources.
- Reduce the acreage of Federal lands that would be transferred to Simplot in the west canyon area, thereby eliminating the area of land that Simplot would acquire for expansion of the gypsum stack in the west canyon under the Proposed Action.
- Result in Simplot’s acquisition of 358 acres of Federal lands, not included in the Proposed Action or Alternative A, to the south and east of the Don Plant for construction of the cooling ponds and gypsum stacks. The different configuration of gypsum stacks would increase the total estimated surface disturbance of the reasonably foreseeable actions compared to the Proposed Action and Alternative A. Table 2-7 summarizes the estimated new surface disturbance from Simplot’s reasonably foreseeable actions on the acquired Federal lands and adjacent Simplot lands based on conceptual facility designs for Alternative B.

Table 2-7. Estimated Surface Disturbance from Simplot’s Planned Facilities (Alternative B)

Feature	Acres of Surface Disturbance		
	Federal Land	Simplot Land	Total
Cooling Pond 1 (including cut and fill extent)	33.5	19.4	53.0
Cooling Pond 2 (including cut and fill extent)	28.3	15.7	44.0
Subtotal: Cooling ponds	61.8	35.1	97.0
East gypsum stack expansion	21.9	26.2	48.0
South gypsum stack expansion	153.4	71.8	225.3
West gypsum stack expansion	0	0	0
Subtotal: Gypsum stacks	175.3	98.0	273.3
200-foot buffer area surrounding all new disturbance to accommodate access roads, utilities, and related infrastructure	88.5	40.5	128.9
Total: All features	325.6	173.6	499.2

Source: Simplot 2020.

Note: Estimates of surface disturbance are based on conceptual designs of the cooling ponds, gypsum stacks, and related infrastructure provided by Simplot. Actual disturbance locations would be finalized during final design and permitting and are subject to change based on technological changes, final engineering, Don Plant production, and other factors.

2.3.1 Reasonably Foreseeable Actions on the Lands Proposed For Exchange

For Alternative B, the types of reasonably foreseeable actions and intended uses of lands included in the exchange would be the same as under the Proposed Action and Alternative A, including cooling ponds, expanded gypsum stacks, and associated infrastructure. However, the boundary of the Federal lands included in the exchange would be modified to avoid the west canyon area (Appendix C, Map 3). As a result, the location and extent of the gypsum stacks would be modified based on the reconfigured Federal land exchange area (Appendix C, Map 7). As depicted in Appendix C, Map 7, Simplot has provided preliminary conceptual locations of the gypsum stacks and cooling ponds for Alternative B based on current information.⁴

⁴ The location and extent of the reasonably foreseeable actions on Federal lands under Alternative B are based on preliminary conceptual designs. Additional research and engineering is necessary to ensure that these preliminary configurations would be technically and economically feasible. Actual design of the reasonably foreseeable actions under Alternative B would be finalized

2.4 No Action Alternative

Under the No Action Alternative, the Blackrock Land Exchange would not occur. Current ownership and existing uses of Federal and non-Federal lands would persist for the reasonably foreseeable future. Simplot would not construct the cooling ponds on the Federal lands and the cooling towers would remain. Simplot would evaluate whether another feasible (both technically and economically) action could be taken to reduce fluoride emissions to comply with the IDEQ's 2016 Consent Order (IDEQ 2016).

Additionally, under the No Action Alternative, the Federal lands would be unavailable for expansion of Simplot's gypsum disposal facilities. Simplot has indicated that failure to obtain the Federal lands for expansion of the gypsum stacks would require the company to reduce production rates and/or cease production at the Don Plant earlier than described under the Proposed Action. If the land exchange were not approved, Simplot would continue to evaluate other fluoride reduction and waste disposal options to enable continued operation of the Don Plant; however, as described in Section 2.5 (*Alternatives Eliminated from Further Analysis*), no feasible alternatives have been identified at this time.

Based on recent gypsum production rates, Keller Associates projects that the lined upper compartment (Phases 2, 3, 4, and 5) of the existing gypsum stack would reach design capacity by 2031, with the top of the gypsum stack reaching an elevation of 5,005 feet above mean sea level if limited to Simplot's present Don Plant property (Keller Associates 2017). The lower compartments (Phases 1 and 6) would still have capacity at this time; however, additional compartments to distribute and manage gypsum slurry and process water will be needed to utilize this space. In order to maintain uninterrupted operation of the facility, the gypsum stack would have to be expanded in advance of the target date when the upper compartment reaches terminal elevation.

Prior to the potential cessation or modification of Don Plant operations described above, the Don Plant would continue to operate in a similar manner to the current condition. There are no anticipated changes to the workforce, vehicle access and traffic, utilities, or water use in the near term.

2.5 Alternatives Eliminated from Further Analysis

2.5.1 Further Reductions in Federal Land Exchange Area

Simplot and the BLM considered other land exchange alternatives that would further reduce the acreage of Federal land included in the exchange. However, further reductions in the Federal land exchange area would generally not support Simplot's purpose and need for the land exchange. As a result, alternatives that include further reductions in the Federal land exchange area were eliminated from further detailed analysis.

2.5.2 Fluoride Reduction Alternatives

2.5.2.1 Indirect Process Water Cooling

As part of the feasibility study (Appendix E), Simplot considered an indirect process water cooling option that would convert the existing direct contact process water cooling towers to non-contact or fresh water cooling towers. This process would involve the installation of several heat exchangers to transfer

during design and permitting and are subject to change based on technical changes, final engineering, Don Plant production, and other factors. If no feasible options are identified for gypsum stack expansion within the reconfigured Federal land boundaries, the operational life of the Don Plant would be reduced compared to the Proposed Action and Alternative A.

the heat between recirculated process cooling water stream and the fresh (non-contact) water that would be recirculated through the cooling towers. Water vapor would evaporate from the recirculated non-contact water. Due to the scaling tendencies of fluoride compounds, condensed vapors from the flash coolers and evaporator condensing system would need to be flushed to the gypsum slurry system. Based on studies conducted on scaling tendencies and associated implications on water balance, Simplot determined that this alternative may not achieve the fluoride reductions necessary to meet the requirements of the 2016 Consent Order. As a result, this alternative was eliminated from further detailed analysis because it would not be technically or economically feasible.

2.5.2.2 Fluoride Process Condensate

As part of the feasibility study (Appendix E), Simplot considered a fluoride process condensate alternative. This process would partially remove fluoride from the process water circuit before it arrives at the cooling towers. In order for the fluoride recovery system to function, a fluoride recovery tower would have to be installed between the evaporator and barometric condenser as well as a recirculation tank and pump and a series of duct sprays. Even with this system, Simplot would also likely still need to construct a cooling pond. Although this alternative may meet fluoride emission reduction requirements, it was eliminated from further detailed analysis because constructing and operating both a fluoride process condensate system and a cooling pond would not be economically feasible.

2.5.3 Other Cooling Pond Locations

As part of the feasibility study (Appendix E), Simplot considered a range of other locations and configurations for the cooling ponds, in addition to those presented under the action alternatives. In a study conducted by Simplot to determine the pond size requirements necessary for replacing all cooling towers, Simplot determined that approximately 90 acres would be needed, plus additional acres for buffers to fully replace the cooling towers. Simplot considered a variety of locations for constructing a cooling pond of this size at or near the existing Don Plant. Criteria used to determine pond location included acreage, constructability, distance from processing plant, distance from residences, public health and safety, and fluoride emissions. Based on the feasibility assessment and application of siting criteria, all of these sites were eliminated from further consideration, as they were not technically or economically feasible. Refer to Section 4.2 in Appendix E (*Feasibility Study*) and the cooling pond fog analysis prepared by Ramboll Environ (2016) for additional information on alternative site locations considered for the cooling ponds.

2.5.4 Gypsum Stack Alternatives

2.5.4.1 Adjacent FMC Property

As part of the feasibility study (Appendix E), Simplot considered an alternative that would acquire and utilize portions of the adjacent FMC property for gypsum disposal. Because a majority of the FMC property falls within the Fort Hall Indian Reservation, the Shoshone Bannock Tribes would have to provide authorization over the land purchase. The FMC land is also included in the EMF Superfund site. Given the current regulatory closure and the challenges associated with land ownership, this alternative was considered to be remote and speculative. This alternative would also not respond to the purpose and need associated with the Proposed Action land exchange because no lands would be proposed for exchange with the BLM. As a result, this alternative was eliminated from further detailed analysis because it does not meet the purpose and need and it is remote and speculative.

2.5.4.2 Vertical Expansion of the Existing Gypsum Stack

As part of its feasibility study (Appendix E), Simplot considered options to expand the gypsum stacks vertically (upward) instead of expanding the area of the gypsum stacks onto the acquired Federal lands. Simplot's gypsum stack engineer, Ardaman & Associates, Inc., determined that the stack can be safely raised to 5,100 feet above mean sea level under current conditions. In order to continue vertical expansion of the existing gypsum stack above 5,100 feet, a detailed stability analysis would be conducted to ensure an appropriate level of safety. Should the stability calculations allow the stack system to grow above 5,100 feet above mean sea level, several challenges would arise. With the increased elevation, the top (main compartment) area of the stack would begin to diminish, increasing operational challenges to manage water inventories. An additional challenge with growth above 5,100 feet would be the pumping and distribution of slurry. Above 5,100 feet, additional pump stations would have to be constructed because the current system is only capable of lifting slurry to 5,000 feet (5,100 feet with modification). The construction of these pumps would complicate operations and pose environmental and safety risks.

Simplot is confident these operational challenges of lifting the slurry to 5,100 feet and higher could be overcome, but without expanding the current gypsum stack laterally in the very near future, the gypsum stack would reach capacity in 15 to 17 years. The gypsum stack is constantly growing vertically; however, the gypsum requires a certain acreage to dry, and dry gypsum is then used to build the gypsum stack higher. If the acreage is insufficient, the gypsum does not have enough time to dry and is not suitable for building the gypsum stack. Because the planned lateral expansion is proposed into canyons and not flat ground, it will take years to be developed to the point to offset the area associated with the top cells of the gypsum stack and allow the lower cells to take the bulk of the gypsum and eventually catch up with the main top cells. Having the lower cells catch up with the upper cells allows the entire stack to grow uniformly and maximize the life of the gypsum stack without disrupting production rates. Therefore, this alternative was eliminated from consideration.

2.5.5 Offsite Waste Disposal via Pipeline

During the scoping period, the BLM received a comment indicating that Simplot should consider an alternative to expanding the gypsum stack onto the acquired Federal lands whereby Simplot would construct a pipeline between the Don Plant and the source of phosphate used at the Don Plant (i.e., the Smoky Canyon Mine) to transport waste back to the mine site for disposal. This alternative would not meet the purpose and need associated with the Proposed Action or the applicant's objective. In addition, construction of a pipeline would not address necessary fluoride reductions at the Don Plant as directed in the Consent Order. As a result, this alternative was eliminated from further detailed analysis.

2.5.6 Alternate Design Options for the Gypsum Stacks and Cooling Ponds

Cooperating agency input and scoping comments requested that the BLM consider other design options for the expanded gypsum stacks and the cooling ponds (such as different types of liners for the gypsum stacks). Requirements for a more specific review of design options for the cooling ponds and expanded gypsum stacks, that may be necessary under existing or future consent orders with the IDEQ and/or EPA, is beyond the scope of this EIS because these facilities would be on private land following the land exchange. Following transfer of the Federal lands into private ownership, Simplot would be responsible for determining final engineering and design details of the gypsum stack expansions and the cooling ponds and permitting these facilities in accordance with other Federal and State requirements. As a result, consideration of specific design options as alternatives were eliminated from further detailed analysis.

2.6 Summary of Alternatives Carried Forward for Detailed Analysis

Table 2-8 summarizes and compares key components of the alternatives being carried forward for detailed analysis in this EIS.

Table 2-8. Summary Comparison of Alternatives Carried Forward for Detailed Analysis

Feature	No Action Alternative	Proposed Action	Alternative A (Increased Non-Federal Land Acreage)	Alternative B (Avoiding the West Canyon)
Acreage of Federal lands proposed for exchange (acres)	0	719	719	711
Acreage of non-Federal lands proposed for exchange (acres)	0	667	667	667
Acreage of additional non-Federal lands that Simplot would offer to convey to the BLM as voluntary mitigation (Parcel A)	0	0	160	160
Total acreage of non-Federal lands that would be conveyed to the BLM	0	667	827	827
Acreage of additional non-Federal lands that Simplot would offer to the BIA or the Shoshone-Bannock Tribes as voluntary donation (Parcel B)	0	0	950	950
Reasonably foreseeable actions on the Federal lands	None	Construction and operation of cooling ponds and expansion of gypsum stacks (Appendix C, Map 6)	Same as the Proposed Action	Similar to the Proposed Action; however, the location and extent of gypsum stack expansion would be modified based on the reconfigured Federal land boundaries (Appendix C, Map 7)
Reasonably foreseeable actions on the non-Federal lands	None	Managed consistent with adjacent lands and in accordance with the Pocatello RMP (BLM 2012)	Same as the Proposed Action, but lands conveyed to and managed by the BLM would include Parcel A	Same as Alternative A
Estimated life of the Don Plant based on potential construction and operation of the reasonably foreseeable actions under the alternatives	2031	2085	2085	2085

2.7 Summary of Environmental Effects

Table 2-9 below provides a summary comparison of environmental effects for the alternatives carried forward for detailed analysis in this EIS. Refer to Chapter 3 (*Affected Environment and Environmental Consequences*) for the detailed analysis and comparison of environmental consequences among the alternatives.

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Table 2-9. Summary Comparison of Environmental Effects of the Alternatives Carried Forward for Detailed Analysis

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Air Quality and Climate Change	<p>Direct/Indirect Effects: No effects on air quality or climate change.</p> <p>Cumulative Effects: Air pollutant emissions from operation of the Don Plant would continue at approximately the same levels as with current operations. Failure to obtain the Federal lands for expansion of the gypsum stacks would require Simplot to eventually reduce production rates at the Don Plant, which would result in reduced air pollutant emissions. If Simplot is unable to develop a feasible alternative strategy for gypsum disposal, the existing gypsum stack is projected to reach design capacity by 2031. Closure of the Don Plant would result in cessation of all point sources associated with plant operations.</p>	<p>Direct/Indirect Effects: No effects on air quality or climate change.</p> <p>Cumulative Effects: Operation of the gypsum stack expansions and the cooling ponds would result in a net increase in operational power consumption at the Don Plant by approximately 40,000 megawatt-hours per year, an increase of greenhouse gas emissions of approximately 12,000 metric tons per year of carbon dioxide equivalent. This is an increase of slightly more than 10 percent over current greenhouse gas emissions levels associated with the Don Plant. Construction activities associated with the development of the cooling ponds and gypsum stack expansions would result in temporary emissions of criteria pollutants and greenhouse gases. These emissions are not anticipated to result in exceedance of the National Ambient Air Quality Standards.</p>	<p>Direct/Indirect Effects: No effects on air quality or climate change.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: No effects on air quality or climate change.</p> <p>Cumulative Effects: Effects on air quality and climate change would generally be the same as the those of Proposed Action, except the location of the gypsum stack expansions and associated releases of fluoride and particulate matter emissions would be situated farther east than under the Proposed Action. Because the gypsum stacks would be located closer to residences east of the Don Plant, Alternative B could result in slightly higher ambient concentrations of fluoride and particulate matter, as well as higher fluoride in forage concentrations, closer to residences. Other cumulative effects on air quality and climate change would be the same as described for the Proposed Action.</p>
Cultural Resources	<p>Direct/Indirect Effects: No effects on cultural resources.</p> <p>Cumulative Effects: No cumulative impacts are expected.</p>	<p>Direct/Indirect Effects: The proposed land exchange would constitute an adverse effect on NRHP-eligible Sites 10PR666 and 10PR979 (SB-02-HL), as these sites would be transferred out of Federal administration. A small segment of a much larger linear site, 10BK274, is part of the Union Pacific right-of-way. It is maintained, upgraded to modern standards, and still in use. Although this segment would be transferred out of Federal administration, the character of the site is not anticipated to change and there would be no effect on this site. No impacts are expected on cultural resources on the non-Federal lands as a result of the Proposed Action.</p> <p>Cumulative Effects: Reasonably foreseeable construction of cooling ponds and gypsum stacks on the Federal lands may damage or result in permanent loss of cultural resources. NRHP-eligible Site 10PR666 and NRHP-ineligible Sites 10BK212, 10BK416 (SB-01-CLC), and 10PR978 (SB-02-CLC) are wholly or partially within the footprints of planned facilities, and are therefore anticipated to be damaged or destroyed during construction of the facilities. Site 10BK274 occurs within right-of-way IDI-001449, which is utilized by the Union Pacific Railroad. The character of the site is not anticipated to change in the reasonably foreseeable future. NRHP-eligible Sites 10BK274 and 10PR979 (SB-02-HL) and NRHP-ineligible Site 10PR93 are not within the footprints of the planned facilities, but would not be subject to protection under Federal laws and regulations, and could be damaged or destroyed due to construction or operational activities. Because NRHP-eligible sites would be inventoried, recorded, and mitigated under the requirements of the National Historic Preservation Act prior to their transfer out of Federal ownership, the cumulative effect resulting from the eventual physical loss of the cultural sites would be minimized.</p> <p>There are no NRHP-eligible sites on the non-Federal lands and there are no direct or indirect effects anticipated on cultural resources on the non-Federal lands as a result of the land exchange.</p>	<p>Direct/Indirect Effects: Direct and indirect effects on cultural resources on the Federal lands would be the same as described for the Proposed Action.</p> <p>On non-Federal lands, no cultural resources were identified on voluntary mitigation Parcel A. Therefore, no effects on cultural resources within voluntary mitigation Parcel A are expected under Alternative A. The 2019 cultural resource inventory of the voluntary donation Parcel B area identified one isolated find and four cultural resource sites, but none of these sites are recommended as eligible for listing on the NRHP and no additional research or preservation is required. Therefore, no impacts are expected on cultural resources if voluntary donation Parcel B is conveyed to the BIA or the Shoshone-Bannock Tribes.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Due to the reconfigured Federal lands boundary, the proposed land exchange would not adversely affect NRHP-eligible Site 10PR666 because it would be retained in Federal ownership. Similar to the Proposed Action, site 10BK274 would be transferred out of Federal administration, but the character of the site is not anticipated to change and there would be no effect on this site. In addition, newly recorded site 10PR979 (SB-02-HL) is located within the Federal lands under Alternative B and the 2019 cultural resource inventory recommended this site as NRHP-eligible under Criterion D. Transfer of NRHP-eligible Site 10PR979 (SB-02-HL) out of Federal administration would constitute an adverse effect.</p> <p>Cumulative Effects: NRHP-eligible Site 10PR666, NRHP-ineligible Sites 10PR93 and 10PR978 (SB-02-CLC), and the cave dwelling in the Wind Canyon cliffs area that is culturally significant to the Shoshone-Bannock Tribes would be retained in Federal ownership and, therefore, would not be damaged or destroyed from construction of the reasonably foreseeable actions. Newly recorded site 10PR979 (SB-02-HL) is located within the Federal lands under Alternative B and the 2019 cultural resource inventory recommended this site as NRHP-eligible under Criterion D; however, the reconfigured layout of the cooling ponds and gypsum stack expansions under Alternative B would avoid NRHP-eligible Site 10PR979 (SB-02-HL). This NRHP-eligible site would be inventoried, recorded, and mitigated in accordance with a Memorandum of Agreement to be prepared under the National Historic Preservation Act requirements and/or protected through a deed restriction prior to transfer out of Federal ownership.</p> <p>Cumulative effects on cultural resources on the non-Federal lands would be the same as described for the Proposed Action and Alternative A.</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Tribal Treaty Rights, Trust Responsibilities, and Tribal Resources	<p>Direct/Indirect Effects: The Federal lands would remain available for the exercise of off-reservation treaty rights by the Shoshone-Bannock Tribes. The non-Federal lands would remain under private ownership and unavailable for off-reservation treaty rights.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on cultural resources and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The proposed land exchange would result in a net loss of 52 acres of land and a change in the location of lands that would be available to the Shoshone-Bannock Tribes to exercise their off-reservation treaty rights. Transfer of NRHP-eligible Sites 10PR666 and 10PR979 (SB-02-HL), as well as other NRHP-ineligible sites identified above for Cultural Resources, out of Federal ownership would constitute an adverse effect.</p> <p>Cumulative Effects: Past, present, and ongoing activities at the Don Plant have contributed to the cumulative degradation of certain tribal uses and resources including cultural resource sites; visual resources; the natural soundscape; and hunting, fishing, harvesting, wood gathering, and livestock grazing opportunities. If the land exchange is approved, the reasonably foreseeable construction of cooling ponds and gypsum stack expansions on the Federal lands may damage or result in further loss or degradation of tribal resources that are important to the Shoshone-Bannock Tribes. NRHP-eligible Site 10PR666 and other NRHP-ineligible sites would be damaged or destroyed by construction of these facilities, while NRHP-eligible Sites 10BK274 and 10PR979 (SB-02-HL) and NRHP-ineligible Site 10PR93 would no longer be subject to protection under Federal laws and regulations.</p> <p>The reasonably foreseeable actions on the Federal lands would result in incremental increases in concentrations of contaminants in groundwater and connected surface water resources utilized by minority populations within the socioeconomic study area (SESA); however, the estimated magnitude of effects on water quality resulting from the reasonably foreseeable actions, including leakage of mercury, arsenic, and phosphorus, described in Section 3.17 (<i>Water Resources</i>), are not anticipated to adversely affect fisheries that are important to the Shoshone-Bannock Tribes relative to baseline water quality conditions and declining trends in total concentrations of various contaminants from ongoing application of source controls and remedial actions at the Don Plant. Current fish consumption advisories for the Portneuf River and the American Falls Reservoir would remain in effect as long as deemed necessary by the Idaho Department of Health and Welfare.</p>	<p>Direct/Indirect Effects: Impacts on tribal treaty rights and trust responsibilities would be the same as described for the Proposed Action for the 719 acres of Federal lands and 667 acres of non-Federal lands. However, an additional 1,109 acres of non-Federal land would become available for tribal use under Alternative A, which would help mitigate adverse impacts on tribal treaty rights and uses compared to the Proposed Action.</p> <p>Cumulative Effects: Cumulative effects on tribal treaty rights, trust responsibilities, and tribal uses would be the same as described for the Proposed Action for the Federal and non-Federal lands. However, offering to convey 160 additional acres of land to the BLM and offering to donate 950 acres to the BIA or to the Shoshone-Bannock Tribes would help mitigate adverse impacts on tribal treaty rights and uses from the land exchange and reasonably foreseeable actions. Therefore, cumulative effects on tribal treaty rights, trust responsibilities, and tribal uses would be less under Alternative A than under the Proposed Action, and would help support policies and purposes in the Shoshone-Bannock Land Use Policy Ordinance, compared to the Proposed Action (Shoshone-Bannock Tribes 2010).</p>	<p>Direct/Indirect Effects: Impacts on tribal treaty rights, trust responsibilities, and tribal uses would generally be the same as described for the Proposed Action and Alternative A, as the total Federal land acreage would be similar to that under the Proposed Action and Alternative A. However, the Federal land area in Alternative B was reconfigured so that NRHP-eligible Site 10PR666 and the surrounding area would be retained under Federal ownership, but NRHP-eligible Site 10PR979 (SB-02-HL) would be transferred out of Federal ownership. Site 10PR666 could continue to be used by members of the Shoshone-Bannock Tribes, while Site 10PR979 (SB-02-HL) would no longer be accessible.</p> <p>Cumulative Effects: Cumulative effects on tribal treaty rights, trust responsibilities, and tribal uses would generally be the same as described for the Proposed Action and Alternative A, except with the reconfigured Federal lands boundary, NRHP-eligible site 10PR666 would remain in BLM ownership and available for tribal use. Newly recorded Site 10PR979 (SB-02-HL) is located within the Federal lands and may be directly disturbed by the south gypsum stack expansion. NRHP-eligible Site 10PR666, NRHP-ineligible Sites 10PR93 and 10PR978 (SB-02-CLC), and the cave dwelling in the Wind Canyon cliffs area that is culturally significant to the Shoshone-Bannock Tribes would be retained in Federal ownership and, therefore, would not be damaged or destroyed from construction of the reasonably foreseeable actions of the cooling ponds and gypsum stacks on the Federal lands.</p>
Geotechnical Stability	<p>Direct/Indirect Effects: No direct effects on geotechnical stability.</p> <p>Cumulative Effects: Simplot has not developed plans for the design and location of the gypsum stack compartments under the No Action Alternative, but any gypsum expansions would be subject to the same design criteria and regulations and contain the same chemical constituents as under the Proposed Action.</p> <p>No cooling ponds would be constructed on the Federal lands or within the present Don Plant boundary; therefore, there would be geotechnical stability issues associated with cooling ponds under the No Action Alternative.</p>	<p>Direct/Indirect Effects: No direct effects on geotechnical stability.</p> <p>Cumulative Effects: A formal failure mode effects analysis has not been completed for the reasonably foreseeable actions; however, potential failure modes for the gypsum stacks and cooling ponds may include a stability failure of their embankments or foundations, a breach of the embankment crest or slopes from severe erosion or cracking, or a hydraulic failure due to internal erosion or piping. With no runoff from the surrounding slopes and with the limited precipitation in the area, overtopping failure should not be a concern as long as adequate freeboard is maintained during operations.</p> <p>In the event of a failure of a gypsum stack, some portion of the retained gypsum slurry would be released and would flow downhill from the release point. Simplot estimates that in addition to any flowable gypsum slurry, each gypsum stack expansion on Federal land would contain approximately 110 to 150 acre-feet of free water. The volume, velocity, and runout distance would depend on the type and size of the breach, the volume and physical characteristics of the unconsolidated slurry, and the topography at and below the breach location.</p> <p>In the event of a failure of a cooling pond, some or all of the cooling water would be released and would flow downhill from the release point. Each cooling pond would have a capacity of approximately 500 acre-feet. The volume, velocity, and runout distance would depend on the type and size of the breach, the volume of water in the pond, and the topography at and below the breach location.</p>	<p>Direct/Indirect Effects: No direct effects on geotechnical stability.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: No direct effects on geotechnical stability.</p> <p>Cumulative Effects: In general, the types of impacts on geotechnical stability would be the same as described for the Proposed Action and Alternative A. However, under Alternative B the west gypsum stack would not be expanded onto the Federal lands and as a result the east and south gypsum stack expansions would generally need to be larger to accommodate anticipated gypsum waste disposal needs at the Don Plant. As a result, the potential for failure of the west gypsum stack expansion may be decreased while the potential failure of the east and south gypsum stacks and run-out area of a failure may be increased compared to the Proposed Action and Alternative A.</p> <p>Avoiding gypsum stack expansion into the west canyon area, which has steeply sloping terrain, by expanding into the more gently sloping terrain to the south and east of the existing gypsum stack would provide for easier construction of the gypsum stacks and the liners.</p>
Hazardous or Solid Wastes	<p>Direct/Indirect Effects: Activities at the Don Plant would continue to result in the transport, use, storage, and disposal of hazardous or solid wastes, which could affect certain resources such as air quality, soils, vegetation, and water resources. However, under the No Action Alternative, there would be no additional direct or</p>	<p>Direct/Indirect Effects: The proposed land exchange would make the new owners responsible for management of their respective lands and for any future liabilities on those lands related to any existing and future hazardous and solid wastes, unless the transfer agreement or other agreement indemnified one of the parties against such liabilities. In the absence of an indemnification agreement, the acquirer may have additional protection against Comprehensive Environmental Response, Compensation,</p>	<p>Direct/Indirect Effects: Same as Proposed Action.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Same as Proposed Action.</p> <p>Cumulative Effects: Cumulative effects on hazardous or solid wastes would be similar to those described for the Proposed Action, except the new phosphogypsum waste disposal area would be configured to fit within the Alternative B Federal lands boundary. This could result in a slight variation in area that</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
	<p>indirect effects on hazardous or solid wastes because ownership, management, and liabilities associated with the Federal and non-Federal lands would remain unchanged.</p> <p>Cumulative Effects: Ongoing activities at the Don Plant would continue to result in the transport, use, storage, and disposal of hazardous or solid wastes, which could affect certain resources such as air quality, soils, vegetation, and water resources. However, because there would be no additional effects on hazardous or solid wastes associated with the land exchange, the No Action Alternative is not expected to contribute to additional cumulative effects.</p>	<p>and Liability Act liabilities under an innocent landowner defense, as described in the Superfund Amendments and Reauthorization Act of 1986. The BLM and Simplot would negotiate removal of the solid waste and mitigation of the two physical hazards identified in the Phase I environmental site assessment for the non-Federal lands (see Appendix J) to the satisfaction of the BLM authorized officer prior to the BLM’s acceptance of title to the property.</p> <p>Cumulative Effects: Potential cumulative effects from a major release from the gypsum stack expansions or the cooling ponds are discussed in Section 3.5 (<i>Geotechnical Stability</i>). Although both the gypsum stack expansion and the cooling ponds would be lined, leakage through the liners could release contaminants into the soil and groundwater. Potential cumulative effects on groundwater are discussed in Section 3.17 (<i>Water Resources</i>) and in Appendix H (<i>Water Resources Technical Report</i>). Wind erosion may disburse phosphogypsum particles in the area of the gypsum stacks, especially during construction or maintenance of the embankments. Any such distribution of phosphogypsum particles would be similar to the effects of wind erosion on the existing gypsum stacks.</p>		<p>would be affected in the event of a gypsum stack release (see Section 3.5, <i>Geotechnical Stability</i>) and areas affected by to dispersion of phosphogypsum particles.</p>
Public Health and Safety	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on fog and ice formation.</p> <p>Cumulative Effects: The No Action Alternative would have no new direct or indirect effects on public safety from fogging and icing of roadways because the cooling ponds would not be constructed.</p>	<p>Direct/Indirect Effects: The land exchange would not increase the potential for fog and ice formation on roadways and would therefore not have any direct impacts on public health and safety from fog and ice formation. The Phase I environmental site assessment for the non-Federal lands (see Appendix J) identified two physical safety hazards. The BLM and Simplot would negotiate mitigation of the two physical hazards to the satisfaction of the BLM authorized officer prior to the BLM’s acceptance of title to the property.</p> <p>Cumulative Effects: Reasonably foreseeable actions associated with the Proposed Action could result in short-term and localized fogging and icing on U.S. Highway 30 and Interstate 86 throughout the operational life of the cooling ponds. The fog and icing could create short-term, unsafe driving conditions in localized areas, particularly during the winter months.</p>	<p>Direct/Indirect Effects: Same as Proposed Action.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Same as Proposed Action.</p> <p>Cumulative Effects: Same as Proposed Action.</p>
Recreation	<p>Direct/Indirect Effects: Recreational opportunities and use would continue on the Federal lands as they have in the past including mountain biking, hiking/running, driving for pleasure, hunting, cross-country skiing, and other recreational activities.</p> <p>The non-Federal lands would continue to be retained in private ownership and the potential beneficial impacts from establishing additional legal access where designated routes of the Chinese Peak-Blackrock Trail system enter the non-Federal land and voluntary mitigation Parcel A would not occur.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on recreation and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The Proposed Action would result in a net loss of 52 acres of BLM-administered land within the Pocatello SRMA (approximately 0.16 percent of land within the Pocatello SRMA). The Federal lands included in the land exchange are entirely contained within the West Bench RMZ (Appendix C, Map 11). Transferring the Federal lands into private land ownership would remove these lands from the Pocatello SRMA and remove the BLM’s ability to actively manage these areas for recreation access and targeted recreational opportunities and outcomes.</p> <p>The 667 acres of non-Federal lands that the BLM would acquire would be managed for recreation opportunities and outcomes consistent with the management objectives of the Pocatello SRMA and Blackrock RMZ. Transfer of the non-Federal lands into BLM administration would allow the establishment of legal access for designated routes T0351, T0352, and 0324, where the routes traverse the non-Federal land. Access for non-motorized and non-mechanized recreational activities would be available from Blackrock Canyon Road (Instrument No. 823202), Route T0351, Route T0352, and Route 0324 where the routes intersect the non-Federal land. The BLM’s acquisition of the non-Federal lands would also provide additional access to the BLM’s Chinese Peak-Blackrock Trail System within Blackrock Canyon and Caddy Canyon.</p> <p>Cumulative Effects: The BLM did not identify any past, present, or reasonably foreseeable actions that would combine with direct and indirect impacts from the land exchange to result in cumulative effects on recreation.</p>	<p>Direct/Indirect Effects: Under Alternative A, the land exchange would result in an additional 160 acres of non-Federal land being transferred into BLM ownership, resulting in a total of 827 acres of land that the BLM would acquire in the land exchange. This represents a net gain of 108 acres of public lands resulting from the land exchange that would be managed to meet the objectives of the Pocatello SRMA and Blackrock RMZ. Impacts on recreation under Alternative A would generally be the same as the impacts described for the Proposed Action, but increased based on the additional 160 acres of non-Federal lands included in voluntary mitigation Parcel A in the Pocatello SRMA and the Blackrock Canyon and Caddy Canyon areas that would be transferred to the BLM. Alternative A would include the same Federal lands in the land exchange as the Proposed Action. As a result, impacts on recreation and access associated with transferring ownership of the Federal lands to Simplot would be the same as those of the Proposed Action.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Under Alternative B, the land exchange would include the same non-Federal lands being transferred from private ownership to the BLM as Alternative A. As a result, impacts on recreation and access associated with the non-Federal lands would be the same as those under Alternative A, including the increased recreational access and benefits associated with voluntary mitigation Parcel A being transferred into BLM administration and managed to meet the objectives of the Pocatello SRMA and Blackrock RMZ.</p> <p>Alternative B would include a different configuration of Federal lands included in the exchange with approximately 8 fewer acres than the Proposed Action and Alternative A (Appendix C, Map 11). Due to the relatively similar acreage of Federal land acreage being transferred out of BLM administration in the West Bench RMZ, recreation impacts associated with the Federal lands are anticipated to be similar to those under the Proposed Action and Alternative A.</p> <p>Cumulative Effects: Same as Proposed Action.</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Visual Resources	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on visual resources.</p> <p>Cumulative Effects: The No Action Alternative would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The 719 acres of Federal lands conveyed to Simplot, which include 447 acres of VRM Class III and 236 acres of VRM Class IV, would no longer be subject to BLM VRM objectives. Activities that create visual contrast and affect scenic quality of the landscape would occur at the discretion of the new landowner.</p> <p>The 667 acres of non-Federal lands conveyed to the BLM would be assigned to VRM classes consistent with those of adjacent lands, which are generally Class III in the northern non-Federal land parcels and Class IV in the southern non-Federal land parcels.</p> <p>Cumulative Effects: Reasonably foreseeable construction of cooling ponds and gypsum stacks on the Federal lands would introduce visual contrasts to the landscape, altering the existing visual character. These actions would convert an estimated 290 acres of the Federal lands and 188 acres of Simplot lands from a generally natural landscape to a modified industrial landscape. These changes would be in contrast with surrounding undeveloped lands to the west, south, and east of the Federal lands. However, the planned facilities would be similar in appearance to the existing gypsum stack directly adjacent to the northern boundary of the Federal lands.</p> <p>No reasonably foreseeable actions that could affect visual resources were identified on the non-Federal lands.</p>	<p>Direct/Indirect Effects: Direct and indirect effects on visual resources would be the same as described for the Proposed Action, with the following differences:</p> <ul style="list-style-type: none">Voluntary mitigation Parcel A (160 acres) would be conveyed to the BLM and managed as VRM Class III. This would increase the acreage of lands managed under the BLM VRM system within the Pocatello Field Office by 160 acres.Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Activities that create visual contrast and affect scenic quality of the landscape would occur at the discretion of the new landowner. <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: The 711 acres of Federal lands conveyed to Simplot, which include 620 acres of VRM Class III and 51 acres of VRM Class IV, would no longer be subject to BLM VRM objectives. Activities that create visual contrast and affect scenic quality of the landscape would occur at the discretion of Simplot.</p> <p>Direct and indirect effects on visual resources on the non-Federal lands would be the same as described for Alternative A.</p> <p>Cumulative Effects: Cumulative effects on visual resources from Alternative B would be similar to those of Alternative A, but Alternative B is estimated to convert 51 more acres of generally natural landscape to a modified industrial landscape. The different gypsum stack configuration is likely to increase the visibility of embankments as seen from the observation points on Interstate 86 and U.S. Highway 30 northeast of the Don Plant; however, the types of visual contrasts created by the embankments would be the same as for Alternative A.</p>
Lands and Realty	<p>Direct/Indirect Effects: Under the No Action Alternative, the proposed land exchange would not occur; the existing ownership, rights-of-way, and public access to Federal lands would remain as described in Section 3.10.2 (<i>Affected Environment</i>).</p> <p>Cumulative Effects: Under the No Action alternative, the land exchange would not occur and the reasonably foreseeable actions would not be implemented. Therefore, there would be no cumulative effects on rights-of-way, access, and easements under the No Action alternative.</p>	<p>Direct/Indirect Effects: The Proposed Action would include the exchange of both surface and subsurface rights for the Federal and non-Federal lands. Existing right-of-way authorizations encumbering both the Federal and non-Federal lands would be transferred to the new owner or reserved. Simplot and the BLM have agreed that no additional reservations, exceptions, covenants, restrictions, or encumbrances shall be placed on the Federal or non-Federal lands without notice to the corresponding party. The proposed land exchange would meet goals, objectives, and management actions of the Pocatello RMP (BLM 2012) by consolidating Federal land ownership and acquiring high resource value lands in the Blackrock and Caddy Canyon areas (i.e., non-Federal lands), while disposing of Federal lands that generally have lower resource values due to their proximity to the existing Don Plant and are more difficult to manage due to the surrounding land uses and land ownership. The Proposed Action would result in the loss of public access to and use of the Federal lands, but would establish additional public access to the non-Federal lands for recreation and other uses.</p> <p>Cumulative Effects: Planned construction of the gypsum stack expansions and cooling ponds may require relocation of the following existing rights-of-way on the Federal lands:</p> <ul style="list-style-type: none">Right-of-way IDI-001123 (held by Union Pacific Railroad)Right-of-way IDI-0-3990 (held by Idaho Power Company)Right-of-way IDI-022083 (held by Simplot for an air quality monitoring facility) <p>These potential rights-of-way conflicts would be resolved by Simplot and the right-of-way holder.</p> <p>No reasonably foreseeable actions were identified on the non-Federal lands that would contribute to cumulative effects on rights-of-way, access, or easements.</p>	<p>Direct/Indirect Effects: Inclusion of voluntary mitigation Parcel A would increase the benefits of consolidating land ownership in the area, compared to the Proposed Action, and would result in a net gain of 108 acres of BLM-administered lands available for public use.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: The direct and indirect effects of the proposed land exchange would be the same as under Alternative A, except the Federal lands exchanged under Alternative B would have a different configuration (Appendix C, Map 2) and contain 8 fewer acres. No additional rights-of-way or easements are located inside the Federal lands proposed for exchange when compared to the Proposed Action.</p> <p>Cumulative Effects: Same as Proposed Action.</p>
Geology and Paleontology	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on geological or paleontological resources.</p> <p>Cumulative Effects: The No Action Alternative would have no cumulative effects on geological or paleontological resources.</p>	<p>Direct/Indirect Effects: The Proposed Action would result in the transfer of 667 acres of non-Federal land into BLM administration. As a result, the BLM would manage the 667 acres of lands under the Paleontological Resources Protection Act and in accordance with the goals, objectives, and management actions in the Pocatello RMP (BLM 2012). The non-Federal lands have a low potential for paleontological resources (Potential Fossil Yield Classification [PFYC] 2); as a result there are no anticipated direct impacts on paleontological resources or the BLM’s management of paleontological resources.</p> <p>The Proposed Action would result in the transfer of 719 acres of Federal land into private ownership. The Federal lands do include approximately 449 acres with a PFYC of 4; however, paleontological surveys of areas with high paleontological potential did</p>	<p>Direct/Indirect Effects: Same as Proposed Action.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Same as under the Proposed Action, except that the Federal land acreage transferred out of BLM administration would include approximately 38 fewer acres of PFYC 4 areas.</p> <p>Cumulative Effects: Construction of the reasonably foreseeable actions under Alternative B would result in an estimated disturbance of 180 acres in PFYC 4 on the Federal lands, an increase of 40 acres compared to the Proposed Action and Alternative A. However, based on surveys conducted in PFYC 4 areas on the Federal lands, the additional area of disturbance in PFYC 4 under Alternative B would occur in areas that are</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
		not identify any fossil material. As a result, minimal impacts on paleontological resources and their management are anticipated from transferring the Federal lands out of BLM administration. Cumulative Effects: Past and present actions on the Federal and non-Federal lands, including construction and maintenance of rights-of-way and easements, are anticipated to have had minimal impacts on paleontological resources due to the relatively low PFYC ratings and the limited amount of rights-of-way on the lands. Excavation associated with construction of the expanded gypsum stacks and cooling ponds on Federal lands could result in inadvertent destruction or damage to paleontological resources in the PFYC 4 areas. However, surveys conducted in PFYC 4 areas on the Federal lands did not identify any fossil materials. As a result, potential impacts on paleontological resources from the reasonably foreseeable actions are expected to be low.		volcanic with no interbedded sedimentary deposits; therefore, the potential for fossil occurrence in these areas is low.
Livestock Grazing	Direct/Indirect Effects: Grazing use of the non-Federal lands would likely continue at similar utilization levels at the discretion of Simplot. Cumulative Effects: The No Action Alternative would have no direct or indirect effects on livestock grazing and, therefore, would not contribute to cumulative effects.	Direct/Indirect Effects: The Federal lands would no longer be available for livestock grazing after being conveyed to Simplot. The BLM estimates that the 719 acres of Federal lands support an estimated 70 animal unit months (AUMs) (BLM 2019c), or approximately 10.2 acres per AUM. Loss of these AUMs would decrease the total AUMs available within the Trail Creek-2 allotment and decrease BLM revenues received from grazing fees. The non-Federal lands have historically been used for livestock grazing, often in conjunction with adjacent BLM-administered lands. Based on utilization trends for adjacent Federal lands, the BLM estimates that they support approximately 44 AUMs, or about 15 acres per AUM. After the exchange, the non-Federal lands would be available for livestock grazing subject to the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997) or goals, objectives, and management actions for livestock grazing specified in the Pocatello RMP (BLM 2012). Cumulative Effects: None of the reasonably foreseeable actions would contribute to cumulative effects on livestock grazing because the Federal lands would no longer be available for livestock grazing after the land exchange. No reasonably foreseeable actions were identified on the non-Federal lands that have the potential to contribute to cumulative effects on livestock grazing.	Direct/Indirect Effects: Direct and indirect effects on livestock grazing would be the same as described for the Proposed Action, with the following differences: <ul style="list-style-type: none">Voluntary mitigation Parcel A (160 acres and an estimated 10.6 AUMs) would be conveyed to the BLM and available for livestock grazing within the Blackrock allotment. This would increase the acreage and forage available for livestock grazing on BLM-administered lands within the Blackrock allotment.Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Livestock grazing on these lands would be at the discretion of the new landowner. Cumulative Effects: Same as Proposed Action.	Direct/Indirect Effects: Direct and indirect effects on livestock grazing would be the same as described for Alternative A, except the reconfigured Alternative B Federal lands would support approximately 69 AUMs, 1 fewer than the Proposed Action and Alternative A. Cumulative Effects: Same as Proposed Action.
Soils	Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on soils; contaminant concentrations in soils surrounding the Don Plant would continue to be monitored in accordance with existing environmental compliance requirements and protocols. Cumulative Effects: The No Action Alternative would have no direct or indirect effects on soils and, therefore, would not contribute to cumulative effects.	Direct/Indirect Effects: The transfer of 719 acres of land out of Federal ownership would result in the Federal lands no longer being subject to the BLM’s soil management actions described in the Pocatello RMP (BLM 2012). The proposed land exchange would also transfer lands with contaminated soils related to the Off-Plant Operable Unit of the EMF Superfund Site out of Federal ownership and to a potentially responsible party (i.e., Simplot), which would release the BLM from associated management responsibilities and liabilities. The soil management goals and objectives set forth in the Pocatello RMP would no longer apply and the implementation plan to achieve these goals and objectives would no longer be required. Specifically, resource protections to minimize soil loss from surface disturbance and promote reclamation success listed under Goal SW-1 would no longer apply after the land exchange but may be subject to State permitting reclamation standards. The transfer of 667 acres of non-Federal land into Federal ownership would result in the non-Federal lands becoming subject to the goals, objectives, and management actions for soils identified and described in the Pocatello RMP (BLM 2012). BLM management actions that would be applied to the non-Federal lands would generally require the incorporation of specific protections for soils for any BLM-authorized actions that could affect soils. Cumulative Effects: Soil disturbance from the reasonably foreseeable actions would affect an estimated 290 acres of the Federal lands and 188 acres of Simplot private lands. Simplot’s application of best management practices specified in permits obtained under requirements of the National Pollutant Discharge Elimination System stormwater program would minimize the potential for soil loss and erosion during construction and operational activities; however, some level of erosion and conveyance of sediment to downgradient waters is anticipated due to the large	Direct/Indirect Effects: Impacts on soils would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for soils identified and described in the Pocatello RMP. Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Soils within these lands would be subject to management objectives and actions by the new landowner. Cumulative Effects: Same as Proposed Action.	Direct/Indirect Effects: Impacts on soils would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for soils identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the soil management goals, objectives, and management actions in the Pocatello RMP. Cumulative Effects: Cumulative effects from Alternative B would be similar to those of the Proposed Action, except the location of the reasonably foreseeable actions would differ with respect to the terrain and soil types present. Soil disturbance from the reasonably foreseeable actions would affect an estimated 326 acres of the Federal lands and 171 acres of Simplot lands. Reasonably foreseeable actions under Alternative B would disturb approximately 36 more acres of Federal lands and 17 fewer acres of Simplot lands than under the Proposed Action. This would include 270 acres of soils with high erosion potential (73 more acres than under the Proposed Action) and 308 acres with high runoff potential (36 more acres than under the Proposed Action). Due to the greater area of soil disturbance and higher potential for erosion and runoff, the configuration of the gypsum stack expansions under Alternative

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
		acreages of disturbed, unvegetated soils that would be exposed during phased construction activities and the steep terrain of the Federal lands. No reasonably foreseeable actions with the potential to affect soils on the non-Federal lands have been identified at this time.		B is anticipated to have a greater adverse effect on soils than for the Proposed Action.
Vegetation	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on vegetation; contaminant concentrations in soils surrounding the Don Plant would continue to be monitored in accordance with existing environmental compliance requirements and protocols.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on vegetation and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The transfer of the 719 acres of Federal land out of Federal ownership would result in the Federal lands no longer being subject to the BLM’s vegetation management actions described in the Pocatello RMP (BLM 2012). The vegetation goals and objectives set forth in the Pocatello RMP would no longer apply and the implementation plan to achieve these goals and objectives would no longer be required.</p> <p>The Proposed Action would also transfer 667 acres of non-Federal land into Federal ownership, which would result in the non-Federal lands being subject to the vegetation goals, objectives, and management actions identified and described in the Pocatello RMP. The Pocatello RMP management actions on non-Federal lands would generally result in protection and restoration of native vegetation (including special status plants) and management of invasive species/noxious weeds, which are actions not currently occurring on non-Federal lands.</p> <p>Cumulative Effects: The reasonably foreseeable development of cooling ponds and expanded gypsum stacks on the Federal lands would result in 290 acres of surface disturbance and clearing of vegetation. Indirect impacts from the potential establishment and spread of noxious and invasive species could occur in and around the cooling ponds and gypsum stack disturbance area. Establishment or spread of noxious and invasive species could result in decreased resilience of native plant communities.</p> <p>The BLM’s development of a 5-year noxious weed treatment plan would result in long-term beneficial effects on vegetation on non-Federal lands. No other direct or indirect effects on vegetation are anticipated on the non-Federal lands as a result of the land exchange.</p>	<p>Direct/Indirect Effects: Impacts on vegetation would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for vegetation identified and described in the Pocatello RMP.</p> <p>Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Vegetation within these lands would be subject to management objectives and actions by the new landowner.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Impacts on vegetation would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for vegetation identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the vegetation management goals, objectives, and management actions in the Pocatello RMP.</p> <p>Cumulative Effects: For the reconfigured Federal land area under Alternative B, the reasonably foreseeable development of cooling ponds and expanded gypsum stacks on the Federal lands would result in surface disturbance and the removal of 326 acres of vegetation, an increase of 36 acres compared to the Proposed Action. As under the Proposed Action, indirect impacts from the potential establishment and spread of noxious and invasive species could occur in and around the cooling ponds and gypsum stack disturbance area. Establishment or spread of noxious and invasive species could result in decreased resilience of native plant communities and transition to a less desirable vegetative state.</p> <p>The effects on vegetation on non-Federal lands under Alternative B would be the same as those under Alternative A.</p>
Wetlands and Riparian Zones	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on wetlands and riparian zones.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on wetlands and riparian zones and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The Proposed Action would have no direct effects on wetlands and riparian zones; however, the transfer of ownership in the Federal and non-Federal lands could result in indirect effects due to the change in wetland and riparian zone management associated with transferring lands between a private entity and a Federal land management agency.</p> <p>Cumulative Effects: If the land exchange is approved, the reasonably foreseeable development of cooling ponds on the Federal lands would have no direct impacts on wetlands or the riparian zone associated with the Portneuf River because no wetlands have been identified on the Federal lands and the Portneuf River riparian zone is approximately 630 feet away from the nearest area of proposed disturbance. Indirect impacts on the Portneuf River riparian zone from development of the cooling pond could include overland runoff and introduction of contaminants such as sediment from surface-disturbing activities. However, railroad tracks and a paved road run adjacent to the riparian zone and separate the disturbance area from the riparian zone.</p> <p>No direct or indirect effects are anticipated on wetlands and riparian zones on the non-Federal lands as a result of the land exchange and no reasonably foreseeable actions were identified that could contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: Impacts on wetlands and riparian zones would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership (voluntary mitigation Parcel A), including one seep, approximately 5 acres of riparian vegetation, and 0.3 mile of intermittent streams. These features would be subject to the goals, objectives, and management actions for wetlands and riparian zones identified and described in the Pocatello RMP.</p> <p>Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Wetlands and riparian zones within these lands, which include approximately 37 acres of riparian vegetation, 1.1 miles of perennial streams, and 1.4 miles of intermittent streams, would be subject to management objectives and actions by the new landowner.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Impacts on wetlands and riparian zones would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership, including the identified seeps/wetland and riparian zones, that would be subject to the goals, objectives, and management actions for wetlands and riparian zones identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the wetland and riparian management goals, objectives, and management actions of the Pocatello RMP. The Alternative B Federal lands contain approximately 0.4 fewer miles of intermittent streams than the Proposed Action and Alternative A Federal lands.</p> <p>Cumulative Effects: Cumulative effects on wetlands and riparian zones on the Federal lands under Alternative B would be the same as described for the Proposed Action but with slightly less permanent impact on riparian vegetation compared to Alternative A (2 acres instead of 17 acres). The effects on wetlands and riparian zones on non-Federal lands under Alternative B would be the same as described for Alternative A.</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Fish and Wildlife	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on fish and wildlife.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on fish and wildlife and, therefore, would not contribute to cumulative effects.</p>	<p>Direct/Indirect Effects: The Proposed Action would have no direct effects on fish and wildlife; however, the transfer of ownership in the Federal and non-Federal lands could result in indirect effects due to the change in fish and wildlife and habitat management associated with transferring lands between a private entity and a Federal land management agency.</p> <p>The transfer of 719 acres of land out of Federal ownership would result in the Federal lands no longer being subject to the BLM’s fish and wildlife management actions described in the Pocatello RMP or best management practices identified in the Pocatello RMP.</p> <p>The Proposed Action would also transfer 667 acres into Federal ownership, which would result in the non-Federal lands being subject to the fish and wildlife goals, objectives, and management actions described in the Pocatello RMP. The Pocatello RMP management actions on non-Federal lands would generally result in protection of fish and wildlife and their habitats (including BLM sensitive species), which are actions not currently occurring on the non-Federal lands. In addition, acquisition of the non-Federal lands and voluntary mitigation Parcel A would consolidate the BLM’s land administration in an area containing crucial mule deer winter range, which would result in a net gain of 158 acres of BLM-administered crucial mule deer range that would be managed in accordance with the Pocatello RMP and other Federal guidance.</p> <p>Cumulative Effects: If the Proposed Action is approved, the reasonably foreseeable development of cooling ponds and gypsum stacks on the Federal lands would permanently remove or alter 290 acres of wildlife habitat. Habitat loss or alteration would be long term and result in direct losses of smaller, less-mobile species of wildlife, such as small mammals and reptiles, and the displacement of more-mobile species into adjacent habitats. In most instances, suitable habitat adjacent to disturbance areas would be available for use by these species. However, displacement would increase competition and could include some local reductions in wildlife populations if adjacent habitats are at carrying capacity.</p> <p>Development and operation of the cooling ponds and expanded gypsum stacks on the Federal lands would result in noise, traffic, and other related activities that can affect wildlife.</p> <p>Potential effects on mule deer from the reasonably foreseeable actions on the Federal land would include the long-term reduction of approximately 141 acres of mule deer winter range habitat on the Federal lands and 57 acres on private lands abutting the Federal lands from vegetation removal. In addition, mule deer may experience increased mortality rates due to increased human activities and vehicle use on roads associated with development and operation of cooling ponds and gypsum stacks.</p> <p>If the Proposed Action is approved, the reasonably foreseeable development of cooling ponds and gypsum stacks on the Federal lands is not anticipated to affect fisheries in the Portneuf River or watershed. No construction would occur in the Portneuf River, and the short, 100-foot segment that flows through the northeastern corner of the Federal lands is approximately 630 feet away from the nearest area of proposed disturbance. In addition, phosphate loading in the Portneuf River, which has affected oxygen levels and aquatic life, has been declining and is anticipated to continue to decline with the expanded gypsum stacks with Simplot’s adherence to the Voluntary Consent Order and Compliance Agreement with the IDEQ (2008), which is intended to fulfill Simplot’s obligations for the Portneuf River Total Maximum Daily Load.</p> <p>No reasonably foreseeable actions were identified that could contribute to cumulative effects on fish and wildlife on non-Federal lands. Following transfer of the 667 acres of non-Federal lands into BLM administration, the BLM would manage fish and wildlife habitat in accordance with the Pocatello RMP.</p>	<p>Direct/Indirect Effects: Impacts on fish and wildlife would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for fish and wildlife identified and described in the Pocatello RMP. In addition, the acquisition of voluntary mitigation Parcel A would further consolidate the BLM’s land administration in an area containing crucial mule deer winter range, which would result in a net gain of 401 acres of BLM-administered mule deer crucial mule deer range that would be managed in accordance with the Pocatello RMP and other guidance.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Impacts on fish and wildlife would be similar to those described in Alternative A except that Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the fish and wildlife management goals, objectives, and management actions in the Pocatello RMP.</p> <p>Cumulative Effects: Cumulative effects on fish and wildlife on the Federal lands would be similar to those under the Proposed Action, but with the following differences. Permanent habitat removal and alteration on the Federal lands would include 326 acres of wildlife habitat (see Section 3.14, <i>Vegetation</i>), an increase of 36 acres compared to the Proposed Action and Alternative A. This habitat impact area constitutes 0.03 percent of the wildlife analysis area and approximately 0.3 percent of existing disturbed areas in the wildlife analysis area. Potential direct effects on mule deer would include the long-term reduction of approximately 166 acres of mule deer winter range habitat on the Federal lands and 57 acres on private lands adjacent to the Federal lands, which is less than 0.1 percent of the mule deer analysis area and approximately 1.0 percent of existing disturbed areas in the mule deer analysis area. None of the three large stick nests documented on cliff substrate are within the Alternative B Federal lands boundary and none would be removed by construction of the reasonably foreseeable actions.</p> <p>The effects on fish and wildlife on non-Federal lands under Alternative B are the same as described for Alternative A.</p>

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
Water Resources	<p>Direct/Indirect Effects: The No Action Alternative would have no direct or indirect effects on water quality; the ongoing remedial actions and trends in groundwater quality are expected to continue. Overall, concentrations of contaminants of concern in monitoring wells, springs, and the Portneuf River have shown declining trends since source controls and extraction activities were implemented at the Don Plant. Arsenic currently exceeds Idaho and Federal primary drinking water standards at the site. Concentrations of total phosphorous (a primary contaminant of concern) show a declining trend, but are still above the regulatory targets.</p> <p>Cumulative Effects: The No Action Alternative would have no direct or indirect effects on water resources and, therefore, would not contribute to cumulative effects. Failure to obtain the Federal lands for expansion of the gypsum stacks would eliminate the potential for incremental increases in arsenic and phosphorus concentrations due to leakage through the liners of expanded gypsum stacks. In addition, if Simplot is unable to develop a feasible alternative strategy for gypsum disposal, the existing gypsum stack is projected to reach design capacity by 2031, which may result in closure of the Don Plant. As a result, potential impacts on water resources associated with production at the Don Plant would be reduced, compared to the action alternatives.</p>	<p>Direct/Indirect Effects: The transfer of the 719 acres of Federal land out of Federal ownership would result in the Federal lands no longer being subject to the BLM’s water resource goals, objectives, and management actions described in the Pocatello RMP (BLM 2012). As a result, the Federal lands and reasonably foreseeable development on the Federal lands would not have the same management objectives for promoting the protection of watersheds described in the Pocatello RMP.</p> <p>The Proposed Action would transfer 667 acres of non-Federal land into Federal ownership, which would result in the non-Federal lands being subject to the water resource goals, objectives, and management actions in the Pocatello RMP (BLM 2012).</p> <p>Cumulative Effects: Operation of the cooling ponds and gypsum stack expansions on the Federal lands would result in incremental additions to phosphorous and arsenic loading due to leakage through the liners. Incremental increases in contaminant concentrations are estimated to peak at approximately 0.000089 mg/L in the processing facility for arsenic and 0.000156 milligram per liter (mg/L) at Siphon Bridge for phosphorus. These increases represent approximately 0.04 percent and 0.07 percent of the existing baseline (year 2019) concentrations of arsenic and phosphorus, respectively, at these monitoring locations. Additionally, ongoing operations and the reasonably foreseeable actions, including operation of the groundwater extraction system, would result in an overall decrease in phosphorous and arsenic concentration at the extraction wells and the Portneuf River in response to remedial actions at the gypsum stacks and the Don Plant. After 2039, the effects of the lining and phosphoric acid plant infrastructure improvements would be fully realized and concentrations would continue to decrease at a lower rate through the end of the assumed operating period (2084). After operations cease, concentrations at the extraction area decline until reaching 0.004 mg/L (arsenic) and 0.08 mg/L (phosphorous) in 2140. Concentrations of phosphorus at the Portneuf River are predicted to decline to the long-term average of about 0.09 mg/L by about 2030. The predicted total phosphorus concentrations would not decrease to the required 0.075 mg/L for any year modeled, which constitutes an adverse effect.⁵ However, the maximum incremental phosphorus concentration associated with the reasonably foreseeable actions contributes only 0.2 percent of the concentration required by the 2008 Voluntary Consent Order and Compliance Agreement.</p>	<p>Direct/Indirect Effects: Impacts on water resources would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for water resources identified and described in the Pocatello RMP.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Direct/Indirect Effects: Impacts on water resources would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for water resources identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the water resource management goals, objectives, and management actions in the Pocatello RMP.</p> <p>Cumulative Effects: Simplot anticipates that the reconfigured gypsum stack expansions under Alternative B would have approximately the same gypsum waste disposal capacity as the gypsum stack expansions that would be developed as a result of the Proposed Action. However, compared to the Proposed Action, the location of the Alternative B gypsum stack expansions is anticipated to eliminate additional loading to the west canyon area, while increasing loading to in the east and south canyon areas. This could result in higher phosphorous and arsenic loading to groundwater extraction wells on the east side of the Don Plant site and could change the duration of maximum concentrations, but is unlikely to affect the overall downward trend in concentrations resulting from the lining of the existing gypsum stacks and continued application of other source controls.</p>
Socioeconomics and Environmental Justice	<p>Direct/Indirect Effects: The No Action Alternative is not projected to affect staffing at the Don Plant or associated facilities. This means that no increase in population, effects on housing, or other social impacts (such as stresses on schools, public services, or utilities, or changes in quality of life) would occur.</p> <p>Under the No Action Alternative, the Don Plant and the related facilities would continue to pay approximately \$3,916,306 in real property and personal property taxes. Because the plant operations would cease sooner under the No Action Alternative, taxes would be collected for fewer years than under the Proposed Action, resulting in long-term, adverse effects.</p> <p>The No Action Alternative would have minimal impacts on nonmarket values, as the non-Federal lands are and would remain unavailable for recreation or other uses by the public because they are private lands. In case the increased cost associated with siting a new gypsum stack farther away from the existing facility would require scaled-down operations or plant shutdown for an unknown period of time, any impacts from noise, human</p>	<p>Direct/Indirect Effects: Should the land exchange be approved, payment in lieu of taxes for the Federal lands would no longer be available for both Power and Bannock Counties. Power County would receive an actual property tax assessment for the Federal lands that occur within the county (approximately 507 acres). Bannock County would receive a property tax assessment for the portion of Federal lands that occur within the county (approximately 212 acres), but would lose the property tax assessment for the non-Federal lands (approximately 667 acres). There would be loss of approximately 455 acres available for property tax assessment within Bannock County; however, the non-Federal lands would be available for payment in lieu of taxes.</p> <p>As stated in Section 3.12 (<i>Livestock Grazing</i>), the 719 acres of Federal lands proposed for exchange yield 70 AUMs and earn \$94.50 in annual grazing fees. This grazing fee would be forgone if the Federal lands are transferred to private ownership under the Proposed Action. The Federal lands currently support an estimated \$2,852.50 (70 x \$40.75) annually of direct economic value. This economic value from livestock grazing would be forgone under the Proposed Action because the Federal lands would no longer be available for livestock grazing.</p> <p>The Proposed Action would not create disproportionately high and adverse human health or environmental effects on minority and low-income populations.</p>	<p>Direct/Indirect Effects: Power County would lose the property tax assessment for voluntary donation Parcel B (approximately 950 acres). There would be a loss of approximately 443 acres of lands available for property tax assessment within Power County. Bannock County would lose the property tax assessment for the non-Federal lands and voluntary mitigation Parcel A (827 acres), but would receive a property tax assessment for the portion of Federal lands that occur within the county (approximately 212 acres). There would be a loss of approximately 614 acres of lands available for property tax assessment; however, the non-Federal lands and voluntary mitigation Parcel A would be available for payment in lieu of taxes.</p> <p>Transfer of the 950-acre voluntary donation Parcel B from private ownership to the BIA or the Shoshone-Bannock Tribes would convey socioeconomic values associated with</p>	<p>Direct/Indirect Effects: Power County would receive an actual property tax assessment for the Federal lands that occur within the county (approximately 206 acres), but lose the property tax assessment for voluntary donation Parcel B (approximately 950 acres). There would be a loss of approximately 744 acres of lands available for property tax assessment within Power County.</p> <p>Bannock County would receive a property tax assessment for the portion of Federal lands that occur within the county (approximately 500 acres), but would lose the property tax assessment for the non-Federal lands (827 acres) and voluntary mitigation Parcel A. There would be a loss of approximately 326 acres of lands available for property tax assessment within Bannock County; however, the non-Federal lands and voluntary mitigation Parcel A would be available for payment in lieu of taxes.</p> <p>Alternative B would not create disproportionately high and adverse human health or environmental effects on minority populations in the SESA.</p>

⁵ The statistical metric for the EIS modeling differs from the modeling calculations used to determine compliance with the 2008 Voluntary Consent Order and Compliance Agreement. The EIS modeling is intended to provide an analysis of potential impacts based on existing information. Compliance with target phosphorus concentrations required by the 2008 Voluntary Consent Order and Compliance Agreement will be evaluated and determined by regulatory agencies through a separate process, independent from this EIS.

Feature	No Action Alternative	Proposed Action	Alternative A	Alternative B (Preferred Alternative)
	<p>presence, and visual disturbance would decrease. This could limit disturbance of wildlife and recreationists on BLM lands surrounding the Don Plant and could increase direct and indirect nonmarket values associated with improved recreational experiences in the area and enhanced habitat for wildlife, resulting in long-term, beneficial effects.</p> <p>A potential closure of the plant under the No Action Alternative would have a long-term, negative effect on the economy of the SESA.</p> <p><i>Minority and Low-Income Populations:</i> Under the No Action Alternative, minority and low-income populations within the SESA would continue to experience disproportionately high adverse impacts. The two block groups in Power County and two block groups in the Fort Hall Reservation would continue to experience high levels of exposure to ozone, lead paint, Superfund proximity, and wastewater discharge.</p> <p>Cumulative Effects: The cumulative effects under the No Action Alternative would be similar to the direct and indirect effects under the No Action Alternative, as described above. If Simplot is unable to develop a feasible alternative strategy for gypsum disposal under the No Action Alternative, the existing gypsum stack is projected to reach design capacity by 2031.</p>	<p>Cumulative Effects: Total capital expenditures under the Proposed Action would be approximately \$221,158,750. Operations and maintenance expenditure would also increase by approximately \$2.25 million. This direct spending has a multiplier effect on the surrounding economic region. Increased employment associated with any new construction could increase the population of the SESA and affect housing, public services, or other quality-of-life issues.</p> <p>The Proposed Action and reasonably foreseeable development of the gypsum stacks and the cooling ponds would support approximately 3,763 total jobs, generate approximately \$172.7 million in labor income, and contribute approximately \$768.3 million in industry activity annually across the region. Continued operation of the Don Plant would extend the annual jobs economic impact compared to the No Action Alternative.</p> <p>The Federal lands currently support an estimated \$2,852.50 (70 x \$40.75) annually of direct economic value. This economic value from livestock grazing would be forgone under the Proposed Action because the Federal lands would no longer be available for livestock grazing. Federal acquisition of the non-Federal lands would ensure the availability of the lands for livestock grazing and estimated annual generation of \$1,813.38 in direct economic value through livestock grazing. The net effect of the Proposed Action on economic value generated by livestock grazing would be an annual loss of approximately \$1,039.12.</p> <p>Reasonably foreseeable development of the Federal lands could result in direct use impacts on nonmarket values by expanding the industrial character of lands within the existing Don Plant property to adjacent, undeveloped lands. Conversion of these lands to a more industrial landscape would diminish the recreational setting and opportunities in the area, such as off-highway vehicle use, mountain biking, horseback riding, wildlife viewing, sightseeing, hunting, and camping.</p> <p><i>Minority and Low-Income Populations:</i> Under the Proposed Action, minority populations within the SESA would continue to experience disproportionately high adverse impacts. The two block groups in Power County and two block groups in the Fort Hall Reservation would continue to experience high levels of exposure to ozone, lead paint, Superfund proximity, and wastewater discharge.</p> <p>The reasonably foreseeable actions on the Federal lands would result in incremental increases in concentrations of contaminants in groundwater, which is connected to surface water resources that are important to minority populations within the SESA; however, the estimated magnitude of effects on water quality resulting from the reasonably foreseeable actions, including leakage of mercury, arsenic, and phosphorus, described in Section 3.17 (<i>Water Resources</i>), are not anticipated to adversely affect fisheries that are utilized by the Shoshone-Bannock Tribes relative to baseline water quality conditions and declining trends in total concentrations of various contaminants from ongoing application of source controls and remedial actions at the Don Plant. Current fish consumption advisories for the Portneuf River and the American Falls Reservoir would remain in effect as long as deemed necessary by the Idaho Department of Health and Welfare.</p>	<p>approximately 200 acres of irrigated agricultural lands and approximately 750 acres of improved rangeland.</p> <p>Alternative A would not create disproportionately high and adverse human health or environmental effects on minority populations in the SESA.</p> <p>Cumulative Effects: Same as Proposed Action.</p>	<p>Cumulative Effects: Same as Proposed Action, except the absence of the west canyon gypsum stack expansion would move the source of fluoride and particulate matter emissions farther from the Fort Hall Reservation, although it would be closer to residences east of the Don Plant. As under the Proposed Action, the overall reduction in fluoride and particulate matter emissions from construction of the cooling ponds is anticipated to negate the effects of moving the source of the emissions.</p>

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CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This chapter describes the affected environment and environmental consequences for those issues raised during internal and external scoping that the BLM determined warranted detailed analysis. Refer to Appendix D (*BLM ID Team Checklist*) for additional information on resources considered but not carried forward for detailed analysis and the rationale. The affected environment refers to the existing conditions for a particular resource, while the environmental consequences are potential changes or effects on the affected environment from the Proposed Action or alternatives. Effects can be direct, indirect, or cumulative, as defined below:

Direct effects “are caused by the action and occur at the same time and place” (40 CFR 1508.8(a)). For purposes of this analysis, direct effects are the changes in land ownership, regulatory requirements, and management that would occur as a result of the proposed land exchange. This includes management of the acquired non-Federal lands in a manner consistent with adjacent or nearby public lands as specified in the Pocatello RMP (BLM 2012).

Indirect effects “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on water and air and other natural systems, including ecosystems” (40 CFR 1508.8(b)). For purposes of this analysis, making the Federal and non-Federal lands available for reasonably foreseeable actions that would otherwise not occur is considered an indirect effect of the proposed land exchange.

Cumulative effects are the impacts on the environment that result “from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). Reasonably foreseeable future actions include activities, developments, or events that have the potential to change the physical, social, economic, and/or biological nature of a specified area. Reasonably foreseeable actions do not include those actions that are highly speculative or indefinite. To be a cumulative effect, it must overlap in space and time with the direct and indirect effects of the Proposed Action, which is the land exchange.

Past and present actions affecting the Federal lands and contributing to cumulative effects are primarily associated with:

- Ongoing phosphate processing activities at Simplot’s Don Plant, which is directly adjacent to the Federal lands (Appendix C, Map 1).
- The BLM’s management of the Federal lands as described in the Pocatello RMP (BLM 2012).
- Existing easements and rights-of-way on the Federal lands as described in Section 3.10 (*Lands and Realty*).
- Past operations at the former Astaris Elemental Phosphorus Plant (also known as the FMC plant) that have affected the Federal lands and contributed to cumulative effects on soils, water, and other

resources in the Off-Plant Operable Unit of the EMF Superfund Site.¹ This plant was closed in 2001. Remedial actions to address soil and groundwater contamination at the FMC Operable Unit are described in the 2012 Interim Amendment to the Record of Decision (EPA 2012). Remedial actions to implement the 2012 Interim Amendment to the Record of Decision, as required by the 2013 Unilateral Administrative Order, began in 2014 (EPA 2013).

Past and present actions affecting the non-Federal lands and contributing to cumulative effects are primarily associated with recreational public use and access, existing easements and rights-of-way on the non-Federal lands as described in Section 3.10 (*Lands and Realty*), and weed treatments on the non-Federal lands. In 2017 and 2018, aerial noxious weed treatments were completed within the non-Federal lands and adjacent BLM-administered lands with dyer's woad as the target species.

For purposes of this analysis, the effects of reasonably foreseeable actions on the Federal and non-Federal lands are considered cumulative effects. The primary reasonably foreseeable actions considered in this EIS are Simplot's planned construction of cooling ponds, gypsum stacks, and associated facilities on the acquired Federal lands. Any reasonably foreseeable actions on the non-Federal lands would generally be managed consistent with surrounding and adjacent Federal lands, as described in the Pocatello RMP (BLM 2012).

In addition to the direct, indirect, and cumulative effects, this chapter also describes the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity, and irreversible or irretrievable commitments of resources that would be involved in the land exchange if it is approved. Each section that follows lists specific issues for analysis; provides a brief description of the affected environment; discusses potential direct, indirect, and cumulative effects; identifies any measures that could be applied to mitigate adverse effects; and indicates whether any residual effects would remain after the application of the mitigation measures.

Throughout this chapter, the following terms are used to describe the areas included in the land exchange or the areas that are included as voluntary donation or voluntary mitigation:

- **Federal Lands:** Lands that the BLM currently administers, which Simplot would acquire if the proposed land exchange is approved. This land is directly adjacent to Simplot's Don Plant (see Appendix C, Map 1). The Proposed Action and Alternative A include 719 acres of Federal lands and Alternative B includes 711 acres of Federal lands.
- **Non-Federal Lands:** The 667 acres of private land that Simplot owns, which the BLM would acquire if the proposed land exchange is approved. These 667 acres are within the Pocatello Special Recreation Management Area, and directly adjacent to the Blackrock Recreation Management Zone (see Appendix C, Map 1). The non-Federal lands comprise nine parcels of private land in the Blackrock and Caddy Canyon areas in Bannock County, approximately 5 miles southeast of Pocatello, Idaho.
- **Voluntary Mitigation Parcel A:** Additional acreage offered voluntarily by Simplot that is included under Alternatives A and B. Voluntary mitigation Parcel A would offer an additional 160 acres of non-Federal lands to the BLM, resulting in a total of 827 acres of land that the BLM would acquire if the proposed land exchange is approved, representing a net gain of approximately 108 acres of Federal lands. Voluntary mitigation Parcel A would be acquired by the BLM and managed consistent

¹ The Off-Plant Operable Unit of the EMF Superfund Site is not specifically mapped. In general, the Off-Plant Operable Unit is defined as the areal extent of all land, including federal, private, and tribal land, surrounding the FMC and Simplot plants with contamination originating from the plants.

with adjacent lands as described in the Pocatello RMP (BLM 2012), including managing an additional 160 acres as part of the Pocatello SRMA.

- **Voluntary Donation Parcel B:** Approximately 950 acres of private land within the Fort Hall Reservation boundary, which Simplot would offer to donate to the BIA for the benefit of the Shoshone-Bannock Tribes or to the Shoshone-Bannock Tribes directly, provided the land exchange is approved and any administrative or judicial appeals have been resolved (Appendix C, Map 5). Inclusion of voluntary donation Parcel B would transfer 950 acres of private land to the BIA or the Shoshone-Bannock Tribes, which would consolidate land ownership on the Fort Hall Reservation and make additional lands available to tribal uses.

3.2 Air Quality and Climate Change

Internal and external scoping for the Blackrock Land Exchange EIS identified the following air quality issues for analysis:

- How would the proposed land exchange and reasonably foreseeable actions affect compliance with air quality and emission standards for criteria pollutants and hazardous air pollutants?
- How would the proposed land exchange and reasonably foreseeable actions affect fluoride emissions rates from the Don Plant?
- How would the proposed land exchange and reasonably foreseeable actions contribute to the regional and global budget of greenhouse gas emissions?

3.2.1 Analysis Methods

3.2.1.1 Analysis Area

The analysis area for direct, indirect, and cumulative effects on air quality is Bannock, Bingham, and Power Counties, which include two nonattainment areas: the Fort Hall Nonattainment Area for particulate matter 10 microns or less in diameter (PM₁₀) and the Portneuf Valley Maintenance Area for PM₁₀. Portions of the Federal lands included in the land exchange would be within the Portneuf Valley Maintenance Area. The analysis area was chosen based on the proximity of the Don Plant to these three counties and the availability of county-level emissions inventories, which allow for analysis of the potential effects of reasonably foreseeable actions on compliance with the Clean Air Act. The analysis area also encompasses the Don Plant and all nearby lands monitored for fluoride deposition.

3.2.1.2 Assumptions

- Simplot would implement required controls to ensure all emission-generating activities at the Don Plant, including reasonably foreseeable actions on the Federal lands, comply with the National Ambient Air Quality Standards (NAAQS), National Emissions Standards for Hazardous Air Pollutants, and the 2016 Consent Order (IDEQ 2016).
- While the Don Plant and other facilities considered in this analysis release a range of emissions, the primary emissions of concern associated with the Federal and non-Federal land areas and the Don Plant are particulate matter, sulfur dioxide (SO₂), and fluoride. As such, these emissions are the focus of this section.

3.2.2 Affected Environment

The Don Plant is a major stationary source of air pollutant emissions as defined in Idaho Administrative Procedures Act 58.01.01.008.10 and operates under a Clean Air Act Title V operating permit. Table 3-1 identifies the potential to emit² for point and area sources associated with operation of the Don Plant in 2018. The largest single source of PM₁₀ and particulate matter 2.5 microns or less in diameter (PM_{2.5}) emissions at the Don Plant is the evaporative cooling towers, while the sulfuric acid plants are responsible for the majority of the SO₂ emissions and more than half of the nitrogen oxide (NO_x) emissions. The boiler units are responsible for the largest proportions of carbon monoxide (CO) and volatile organic compound (VOC) emissions. Fluoride emissions originate primarily from the cooling towers and the gypsum stack. Most greenhouse gas emissions, expressed in a common unit as carbon dioxide equivalent (CO₂e), at the Don Plant are associated with operation of the boiler and granulation units.

Table 3-1. Emissions for the Don Plant: Point and Area Sources, Year 2018

Description	Emission Rate (tons per year)							
	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC	Fluorides	CO ₂ e
Point Sources – Potential to Emit								
Emergency and Standby Generators	0.05	0.04	0.06	0.96	0.32	0.05	0.00	36
Ammonium Sulfate Plant	12.69	12.02	0.00	0.30	1.06	0.07	0.00	1,626
Babcock and Wilcox Boiler, 175 MMBTU/hour	5.83	5.83	0.46	30.66	61.30	4.22	0.00	4
Babcock and Wilcox Boiler, 63.8 MMBTU/hour	1.40	1.40	0.17	12.63	51.10	0.84	0.00	34,571
Granulation 1	58.82	58.82	0.02	6.30	1.60	0.46	34.47	10,837
Granulation 2	51.53	50.76	0.01	7.40	1.80	0.46	30.17	10,837
Granulation 3	26.68	26.24	0.09	14.90	12.70	0.90	5.65	18,965
Phosphoric Acid Plant	24.97	24.97	29.84	0.00	0.00	0.00	4.71	0
Evaporative Cooling Towers	123.84	123.84	0.00	0.00	0.00	0.00	173.60	0
Superphosphoric Acid Plant	0.00	0.00	0.00	0.40	18.30	0.00	1.63	0
Sulfuric Acid 300	49.80	49.80	656.37	64.00	0.00	0.00	0.00	0
Sulfuric Acid 400	59.60	34.58	657.07	42.10	0.00	0.00	0.00	0
Subtotal: Point Sources	415.21	388.30	1,344.08	179.65	148.18	7.00	250.23	76,876
Area Sources – Potential to Emit								
Gypsum Stack ³	18.84	6.65	0.00	0.00	0.00	0.00	76.65	0
Plant Road	16.72	2.67	0.00	0.00	0.00	0.00	0.00	0
Cooling Ponds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
External Source of Power not Generated at the Don Plant - Purchased (greenhouse gas emissions only)								33,234
Total	450.77	397.62	1344.08	179.65	148.18	7.00	326.88	110,110

Source: Simplot 2019e.

Note: Mobile source emissions were not available and are anticipated to be short term and negligible in relation to total emissions.

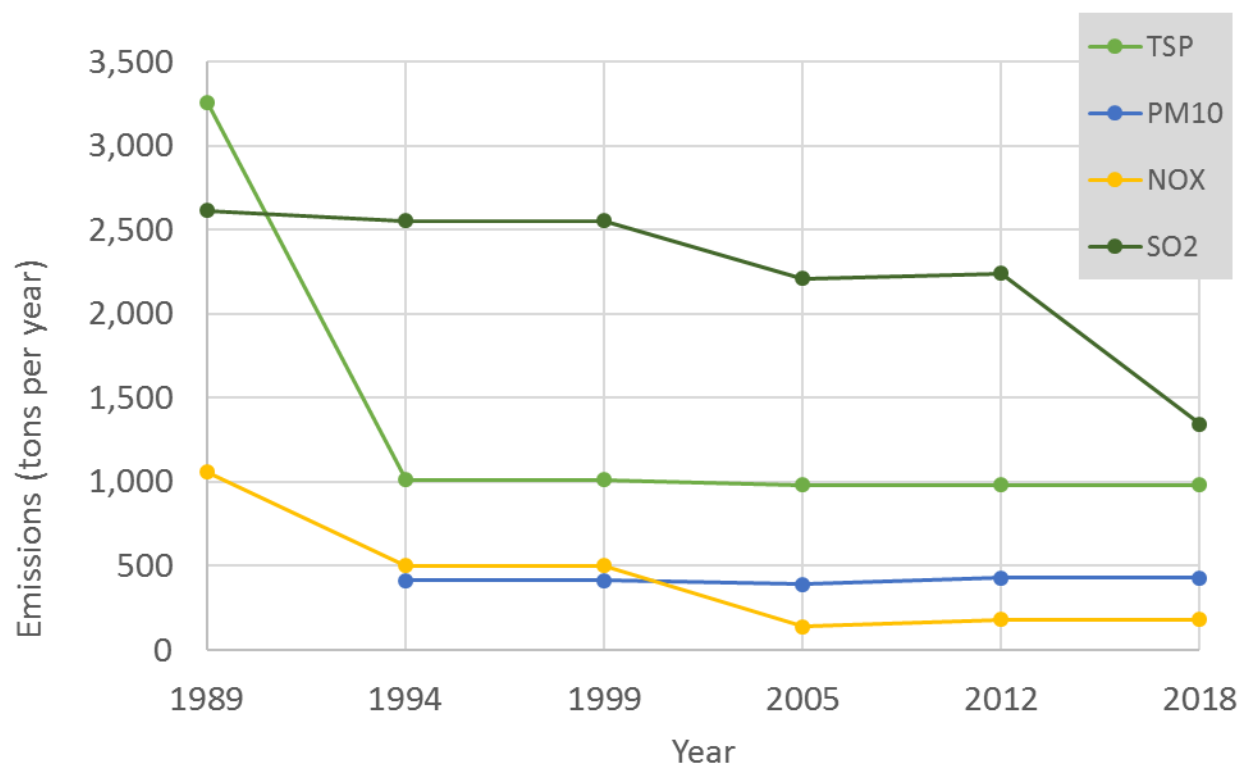
MMBTU = one million British Thermal Units, N/A = not applicable.

² "Potential to emit" is defined in 40 CFR 52.21 and 70.2 as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design."

³ All the emissions from the 10-acre decant pond are included in the gypsum stack emissions.

Figure 3-1 shows trends in permitted emission limits for total suspended particulate matter, PM₁₀, SO₂, and NO_x emissions at the Don Plant from 1989 to 2018. During this period, the permitted emissions limits for SO₂ and NO_x decreased by more than 50 percent and 80 percent, respectively. Permitted emission limits for total suspended particulate also decreased substantially over the same period.

Figure 3-1. Don Plant Permitted Emission Limits for Stationary Sources, Years 1989–2018



Source: Simplot 2019f.

Note: TSP = total suspended particulate

Table 3-2 shows actual emissions for permitted sources and permit emission limits for 2018, the most recent year for which data were available. For PM_{2.5} and PM₁₀, actual emissions were less than 25 percent of the permitted limit, SO₂ emissions were approximately 61 percent of the permitted limit, and fluoride emissions a little less than half the permitted levels.

Table 3-2. Actual Emissions of Don Plant Stationary Sources Compared to Permit Emission Limits, Year 2018

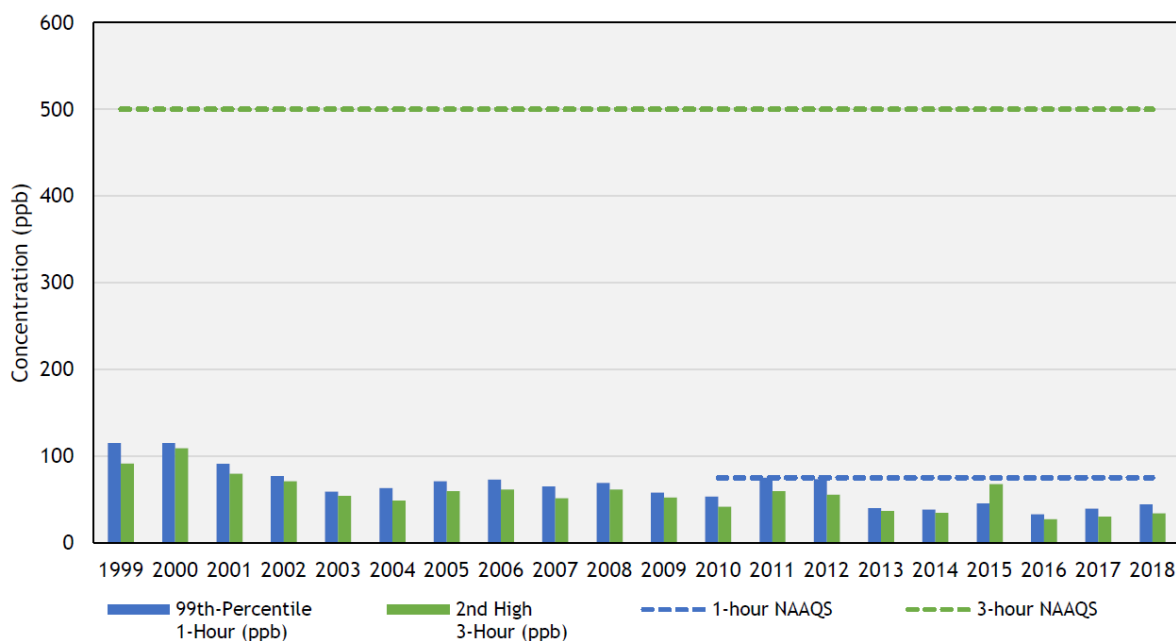
Description	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC	Fluorides
Actual (tons per year)	90.57	90.57	817.06	127.86	84.49	5.33	143.92
Permit Emission Limit (tons per year)	450.76	397.61	1344.07	179.51	148.15	6.99	326.88
Actual as Percentage of Permitted	21	23	61	71	57	76	44

Source: Simplot 2019g.

SO₂ monitoring has been performed since 1999 at the IDEQ's monitoring station at the Pocatello Wastewater Treatment Plant Station, which is approximately 400 meters from the closest point to the

Don Plant boundary and is the closest SO₂ monitoring site to the Don Plant. Figure 3-2 shows the monitored SO₂ concentrations from 1999 to 2018 compared to the 1-hour and 3-hour NAAQS. All observed 3-hour SO₂ concentrations were well below the secondary SO₂ standard. The 1-hour SO₂ primary standard of 75 parts per billion was established by the EPA in 2010 and has been exceeded once at 75.2 parts per billion in 2011.

Figure 3-2. Observed SO₂ concentrations compared to the NAAQS at the Pocatello Wastewater Treatment Plant Station, Years 1999–2018

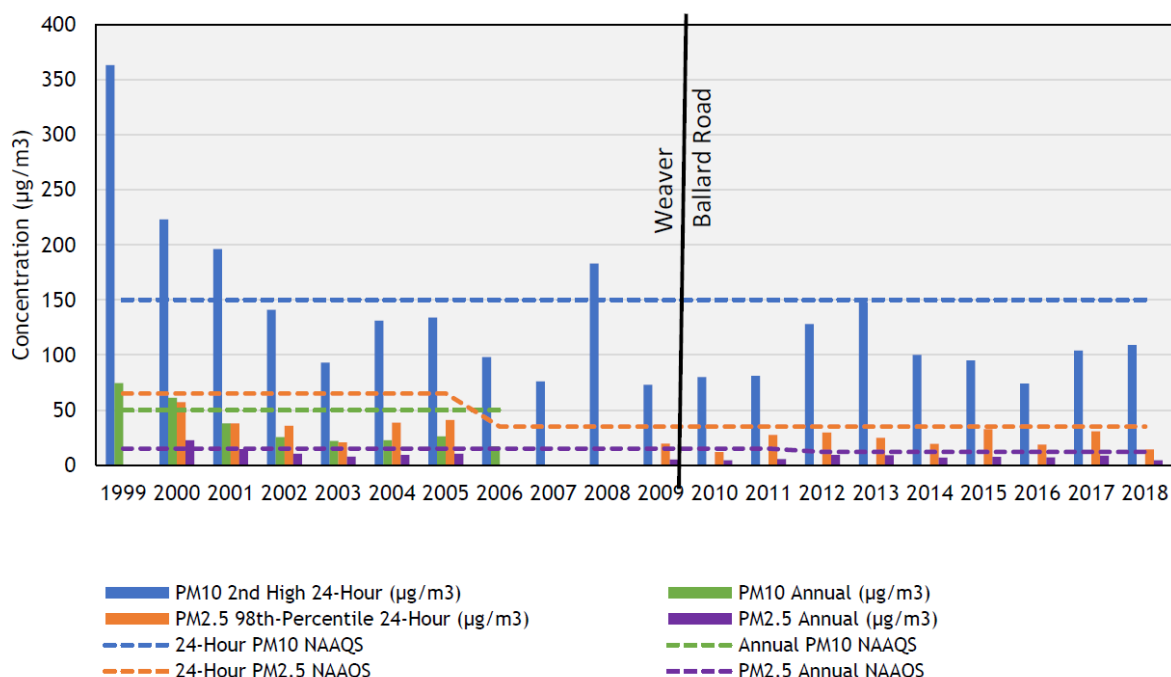


Source: IDEQ air quality monitoring data, as compiled by Simplot 2019h.
Note: ppb = parts per billion.

Air quality monitoring for PM_{2.5} and PM₁₀ was performed at the Shoshone-Bannock Tribes Weaver Road site through the end of 2009. This site was about 500 meters northwest of the closest point to the Don Plant boundary. The site was then moved to the Ballard Road location approximately 9,300 meters northeast of the Don Plant. Figure 3-3 shows the observed PM_{2.5} and PM₁₀ concentrations from 1999 to 2018 at the Shoshone-Bannock Tribes Weaver Road station and Ballard Road station. Since 2009, the closest approach to the 24-hour PM₁₀ standard was 148 micrograms per cubic meter (µg/m³) in 2013, which is just below the 24-hour PM₁₀ standard of 150 µg/m³. Similarly, the 24-hour PM_{2.5} of 35 µg/m³ has not been exceeded since at least 2009, with the closest approach to the standard at 32.7 µg/m³ in 2015.

In June 2017, Simplot installed a continuous particulate matter monitor at Station 1, which is near the old Weaver Road station. During the last 7 months of 2017, the second highest PM₁₀ concentration recorded was 108.8 µg/m³. The second highest PM₁₀ concentration recorded in all of 2018 was 124.8 µg/m³ and the second highest PM₁₀ concentration recorded in the first 6 months of 2019 was 93.7 µg/m³. Based on this 2-year monitoring period (June 2017 through June 2019), the PM₁₀ concentration was below the 24-hour PM₁₀ standard; however, 3 years of data are required to assess concentrations for purposes of regulatory compliance.

Figure 3-3. Observed PM_{2.5} and PM₁₀ Concentrations Compared to the NAAQS at the Shoshone-Bannock Tribes Weaver Road Station and Ballard Road Station, Years 1999–2018



Source: Shoshone-Bannock air quality monitoring data, as compiled by Simplot 2019h.

Air quality monitoring for PM_{2.5} and PM₁₀ is performed by the IDEQ at the corner of Garrett Way and East Gould Street (Garrett and Gould Site) in Pocatello, Idaho. Table 3-3 shows the 20 most recent years of PM₁₀ data at this site. The PM₁₀ monitor is used for assessing compliance with the NAAQS and air quality attainment status. Since 2012, no exceedances of the 24-hour PM₁₀ standard have occurred at this location. A continuous PM_{2.5} monitor operates at the location to support the IDEQ's air quality forecasting, air quality index, and smoke management programs, but is not used to assess compliance with the NAAQS.

Table 3-3. Observed PM_{2.5} and PM₁₀ Concentrations ($\mu\text{g}/\text{m}^3$) at the IDEQ Garrett and Gould Site, Pocatello, Idaho, Years 1999–2018

Averaging Period and Pollutant Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	NAAQS
24-hour PM ₁₀ 2 nd High	83	65	69	194	62	87	74	65	120	99	150
24-hour PM _{2.5} 98 th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35
Annual Average PM _{2.5}	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	NAAQS
24-hour PM ₁₀ 2 nd High	168	93	88	78	61	56	58	53	51	50	150
24-hour PM _{2.5} 98 th Percentile	56	57	41	35	17	33	34	21	N/A	N/A	35
Annual Average PM _{2.5}	9.6	10.5	9.9	8.8	5.9	8.7	9.5	6.4	N/A	N/A	12

Source: IDEQ 2019a

N/A = not applicable

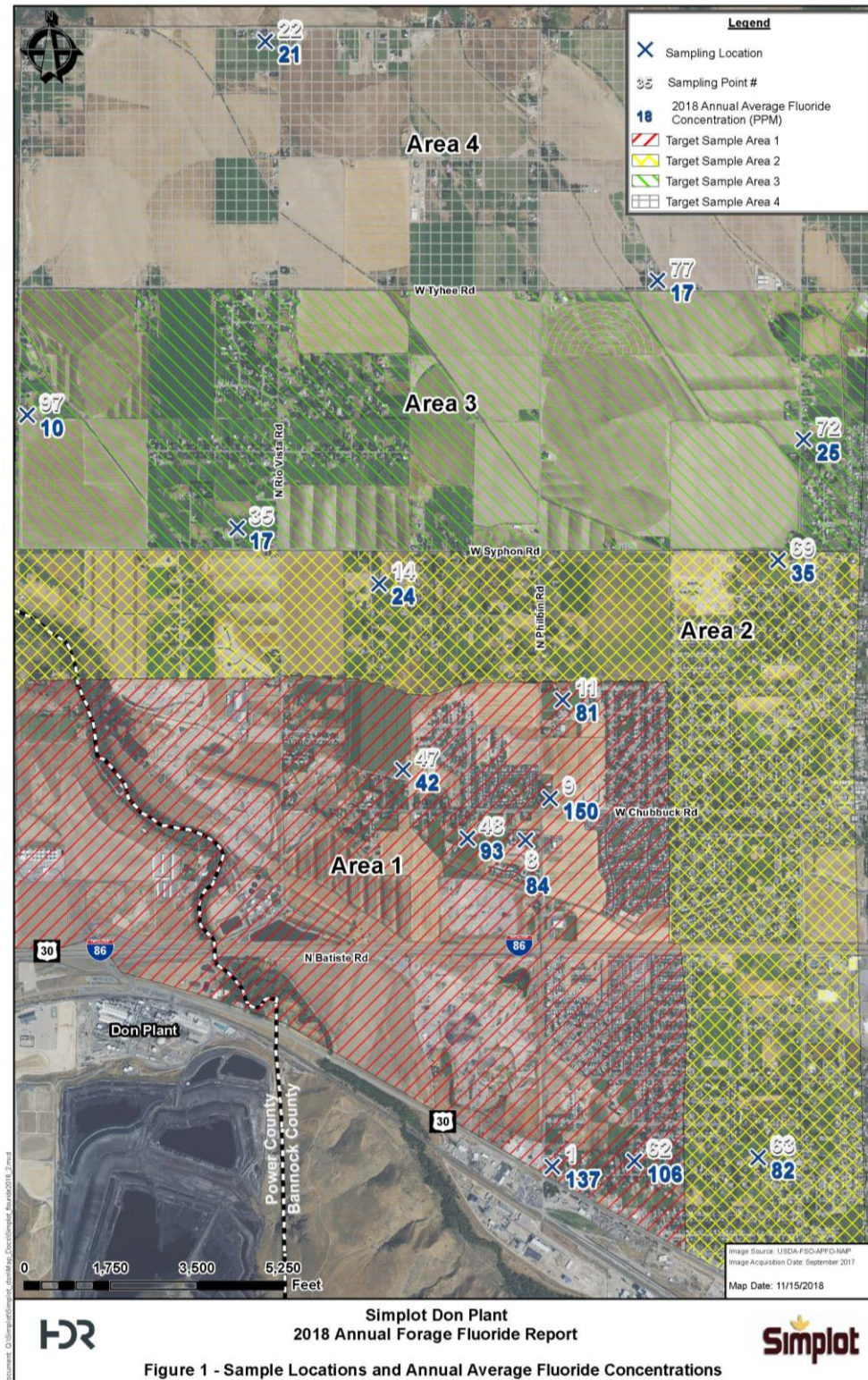
Note: Two PM₁₀ monitors (Hi-Vol and TEOM) were operating from 2001 through 2009. This table reports the highest value of the two monitors.

Annual fluoride in forage reports submitted to the IDEQ for 2012 and 2013 indicate apparent violations of the fluoride in forage standard established by Idaho Administrative Procedures Act 58.01.01.577.06. This standard for fluorides is a primary and secondary air quality standard in which the concentrations in the ambient air result in a total fluoride content in vegetation used for feed and forage of no more than:

- a. Annual standard: 40 parts per million, dry basis – annual arithmetic mean
- b. Bimonthly standard: 60 parts per million, dry basis – monthly concentration for 2 consecutive months
- c. Monthly standard: 80 parts per million, dry basis – monthly concentration never to be exceeded

Simplot is under a Consent Order to reduce these fluoride concentrations (IDEQ 2016). The most recent year of measurements (2018) is shown on Figure 3-4, which depicts four target areas in the vicinity of the Don Plant. Target Area 1 shows that nearly all locations exceed the annual standard. All other areas are below the standard except for Target Sample Area 2 sampling point #63. The same locations also exceed the monthly fluoride forage standards. Similar spatial pattern and exceedance levels were recorded in 2016 and 2017.

Figure 3-4. Fluoride in Forage Annual Sampling Concentrations in the Vicinity of the Don Plant, Year 2018



Source: Simplot 2019i.
Note: PPM = parts per million.

3.2.3 Direct and Indirect Effects

There would be no direct effects on air quality or climate change from the Proposed Action and Alternatives A and B. Making the Federal lands available for Simplot's reasonably foreseeable actions would be an indirect effect of the proposed land exchange under all the action alternatives. Potential effects of these reasonably foreseeable future actions on air quality are described in Section 3.2.4 (*Cumulative Effects*). The land exchange would also result in the transfer of non-Federal land into Federal administration, which would be subject to air quality and other resource management goals, objectives, and management actions in the Pocatello RMP that may reduce development and activities that contribute to air emissions. BLM acquisition and administration of the non-Federal lands, and the increased access opportunities provided by BLM administration of the non-Federal lands, may increase motorized vehicle use in the area, resulting in minor increases in mobile source emissions.

The No Action Alternative would have no direct or indirect effects on air quality and climate change; air pollutant emissions from operation of the Don Plant would continue at approximately the same levels shown in Table 3-2 for the foreseeable future.

3.2.4 Cumulative Effects

Ongoing operations at the Don Plant contribute to regional air pollutant emissions through point and area sources listed in Table 3-1. Other existing, major point sources of emissions nearby in the analysis area (Bannock, Power, and Bingham Counties) that could contribute to cumulative effects on air quality include the Blackfoot and Shelley facilities of Basic American Foods (IDEQ 2019b). However, emissions from these facilities are considerably less than those of the Don Plant. Major point source emissions are small relative to each county's area source emissions for particulate matter, CO, SO₂, and NO_x, as shown in Table 3-4. Other than the Don Plant, no other sources of fluoride emissions are reported in the three-county analysis area in the 2017 emission inventory. No large expansions or closure of major point sources are reasonably foreseen in the three-county analysis area.

Table 3-4. Emission Inventory for Bannock, Power, and Bingham Counties, Idaho, Year 2017 (in tons per year)

County and Source Type	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
Bannock County						
Major Point	0.00	0.00	0.20	11.93	1.50	0.12
Area	3,236.63	634.69	7.47	202.39	616.27	1,232.21
On-Road	91.51	59.95	4.46	2,287.59	6,867.64	863.77
Non-Road	26.71	25.44	0.49	319.50	3,986.31	301.05
Power County						
Major Point ⁴	0.00	0.00	0.00	0.00	0.00	0.00
Area	5,131.06	1,031.37	2.67	39.05	258.71	205.34
On-Road	28.40	21.07	1.49	910.47	1539.10	197.82
Non-Road	19.85	18.88	0.28	203.99	1231.34	320.67
Bingham County						
Major Point	127.91	87.00	9.38	88.16	139.23	7.90
Area	10,309.85	2,047.09	8.78	150.01	682.23	870.63

⁴ Does not include emissions from Simplot's Don Plant.

County and Source Type	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
On-Road	74.61	50.81	3.55	1,884.05	4,976.12	627.28
Non-Road	28.11	27.14	0.48	345.40	1,340.16	140.43
Totals for Three-County Area						
Major Point	127.91	87.00	9.58	100.09	140.73	8.02
Area	18,677.55	3,713.15	18.92	391.44	1,557.21	2,308.17
On-Road	194.51	131.83	9.49	5,082.11	1,3382.86	1,688.87
Non-Road	74.68	71.46	1.24	868.89	6,557.80	762.14

Source: IDEQ 2019b.

Note: This emission inventory does not include emissions from airports or locomotive operations.

The Federal lands are within the Portneuf Valley PM₁₀ Maintenance Area and adjacent to the Fort Hall PM₁₀ Nonattainment Area (Appendix C, Map 8). In addition, voluntary donation Parcel B is located in the Fort Hall PM₁₀ Nonattainment Area (Appendix C, Map 8). Section 176(c) of the Clean Air Act prohibits Federal entities from taking actions in nonattainment or maintenance areas that do not “conform” to the State Implementation Plan.⁵ The purpose of this conformity requirement is to ensure that Federal activities do not: (1) interfere with the emissions budgets in the State Implementation Plans, (2) cause or contribute to new violations of the NAAQS, or (3) impede the ability to attain or maintain the NAAQS. To implement Clean Air Act Section 176(c), the EPA issued the General Conformity Rule (40 CFR Part 93, Subpart B). The General Conformity Rule applies only to Federal actions in nonattainment or maintenance areas. Because portions of the Proposed Action would be within the Portneuf Valley Maintenance Area for PM₁₀, it is subject to the conformity requirements.

The General Conformity Rule established emissions thresholds (40 CFR 93.153), also known as *de minimis* levels, for use in evaluating the conformity of a Federal action. To evaluate conformity, all changes in direct and indirect emissions (as defined in the rule) are summed. If the net emissions increases due to the Federal action are less than the thresholds, the action is presumed to conform and no further conformity evaluation is required. If the emissions increases exceed any of the thresholds, a General Conformity Determination is required.

3.2.4.1 Proposed Action

If the land exchange is approved, construction of the reasonably foreseeable actions of the cooling ponds on the Federal lands would affect the rates and locations of fluoride and particulate matter emissions; however, no cumulative air quality effects are anticipated that would contribute to exceedances of regulatory thresholds from the incremental effects of expanded gypsum stacks and cooling ponds in combination with nearby sources and foreseeable changes in regional emissions.

The planned construction of new cooling ponds on the Federal lands would provide an alternative mechanism for the heat transfer of cooling circuit water from the Don Plant, enabling eventual closure of the existing cooling towers to meet fluoride reduction requirements mandated by the 2016 Consent Order. Closure of the cooling towers would eliminate fluoride and particulate matter emissions from the cooling towers. Both the new cooling ponds and gypsum stack expansions would have fluoride and particulate matter emissions associated with their operation. Simplot estimates the potential increase in allowable emissions of fluoride from the cooling ponds and gypsum stack would be 117 tons per year (tpy) while the reduction in fluoride emissions from closing of the cooling tower would be 133.3 tpy to 191.9 tpy (Simplot 2019j). Similarly, PM₁₀ emissions would have a potential increase in allowable

⁵ State Implementation Plans are EPA-approved plans that set forth the emission control requirements adopted by the State.

emissions from the cooling ponds of 6.04 tpy under the Proposed Action (Simplot 2019j) while the reduction from the elimination of the cooling tower would be 123.84 tpy. Approval of the land exchange and construction of the expanded gypsum stacks and cooling ponds would extend the life of the Don Plant by an estimated 65 years, which would increase the duration of annual emissions associated with the Don Plant.

The planned locations of the cooling ponds would emit fluoride and particulate matter emissions closer to nearby residences than the current cooling tower location (up to approximately 0.5 mile closer to residences). Similarly, the eastern gypsum stack expansion would emit fluoride and particulate matter closer to nearby residences than the existing gypsum stack (up to approximately 0.25 mile closer to residences). However, because of the decrease in the fluoride emissions from the cooling towers closure (see paragraph above), the fluoride in forage concentrations are anticipated to decrease in all forage sampling areas with no exceedances of the State standards. Similarly, the overall reduction in particulate matter emissions (see paragraph above) is anticipated to negate the effects of moving some of the emissions closer to nearby populations. Ongoing PM₁₀ monitoring at Station 1 and the Garrett and Gould station would continue and could indicate whether there are PM₁₀ air quality issues.

In addition to the operational emissions, construction activities associated with the development of the cooling ponds and gypsum stack expansions would result in temporary emissions of criteria pollutants. Based on the phased construction schedule, these emissions are not anticipated to result in exceedance of the NAAQS.

The Proposed Action would not lead to any increase in direct or indirect emissions in the Portneuf Valley PM₁₀ Maintenance Area or the Fort Hall PM₁₀ Nonattainment Area (as defined in the General Conformity Rule). Construction of the reasonably foreseeable actions of the cooling ponds and gypsum stack expansions in the Portneuf Valley PM₁₀ Maintenance Area would produce emissions; however, emissions that the Federal agency does not have authority to regulate or control are not subject to conformity. Because construction of the cooling ponds and gypsum stack expansions is not part of the Proposed Action (i.e., they are reasonably foreseeable actions), the BLM does not have authority to regulate or control the construction emissions, so they are not included in the comparison of emissions to the conformity thresholds. In addition, there are no proposed or reasonably foreseeable actions that would result in an increase in direct or indirect emissions in the Fort Hall PM₁₀ Nonattainment Area. Because the Proposed Action would not lead to any increase in direct or indirect emissions in either the Portneuf Valley PM₁₀ Maintenance Area or the Fort Hall PM₁₀ Nonattainment Area (as defined in the General Conformity Rule), the emissions change due to the action would be zero, which is less than the conformity thresholds. Accordingly, no further conformity evaluation is required, and the Proposed Action does not require a General Conformity Determination.

Operation of the gypsum stack expansions and the cooling ponds would result in a net increase in operational power consumption at the Don Plant by approximately 40,000 megawatt-hours per year. Based on the power mix for Western Electricity Coordinating Council Northwest subregion, this would result in an increase of greenhouse gas emissions of approximately 12,000 metric tpy of CO_{2e}. This is an increase of slightly more than 10 percent over current greenhouse gas emissions levels associated with the Don Plant. The national annual emissions of greenhouse gases in 2017 were approximately 6,456.7 million metric tons (EPA 2019a). Forecasted greenhouse gas emissions for sources within the State of Idaho for the year 2020 are 44.1 million metric tons (Center for Climate Strategies 2008). The additional greenhouse gas emissions contributed by ongoing operation of the Don Plant after approval of the Proposed Action—12,000 metric tpy—represent less than one-thousandth of one percent of the 2017 national annual emissions and less than one-tenth of one percent of 2020 state emissions. Total annual greenhouse gas emissions from ongoing operation of the Don Plant—122,110 metric tpy—represent

approximately 0.3 percent of 2020 state emissions. Approval of the land exchange and construction of the expanded gypsum stacks and cooling ponds would extend the life of the Don Plant by an estimated 65 years, which would increase the duration of annual greenhouse gas emissions associated with the Don Plant.

Activities associated with construction of the cooling ponds and gypsum stack expansions would result in temporary emissions of greenhouse gases. Emissions from these sources have not been quantified due to uncertainties in forecasting future sources of phosphate ore and the design of the reasonably foreseeable actions, but are anticipated to be minimal in comparison to greenhouse gas emissions from Don Plant operations.

Existing climate prediction models are global in nature; therefore, they are not at the appropriate scale to estimate potential impacts of climate change from operation of the Don Plant. Consequently, it is not yet possible to know with confidence the net impact on climate from the Proposed Action. The lack of scientific tools designed to predict climate change on regional or local scales limits the ability to quantify potential future impacts with a strong degree of certainty. Therefore, climate change analysis for the purpose of this document is limited to accounting and disclosing of factors that contribute to climate change. The effects of the Proposed Action on greenhouse gas emissions and climate change would continue after the Don Plant is closed as a result of the long (estimated 100 years) residence time for certain greenhouse gases in the atmosphere.

The Intergovernmental Panel on Climate Change (2013) indicates that an increase in atmospheric greenhouse gas concentration results in an increase in the Earth's average surface temperature, primarily by trapping and thus decreasing the amount of heat energy radiated by the Earth back into space. The phenomenon is commonly referred to as global warming. The Intergovernmental Panel on Climate Change expects global warming to affect weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, all of which is collectively referred to as climate change. Climate change forecast for Idaho predict altered precipitation patterns, warming stream temperatures, declining populations of several fish species, more common wildfires, expansion of deserts, and reduced water availability (Abatzoglou et al. 2014; EPA 2016a).

3.2.4.2 Alternative A

Cumulative effects on air quality and climate change would be the same as described for the Proposed Action.

3.2.4.3 Alternative B

Effects on air quality and climate change would generally be the same as those of the Proposed Action, except the location of the gypsum stack expansions and associated releases of fluoride and particulate matter emissions would be situated farther east than under the Proposed Action. Because the gypsum stacks would be closer to residences east of the Don Plant, Alternative B could result in slightly higher ambient concentrations of fluoride and particulate matter, as well as higher fluoride in forage concentrations, closer to residences. However, as under the Proposed Action, the overall reduction in fluoride and particulate matter emissions is anticipated to negate the effects of moving some of the emissions closer to nearby populations. Other cumulative effects on air quality and climate change would be the same as described for the Proposed Action.

3.2.4.4 No Action Alternative

Air pollutant emissions from operation of the Don Plant would continue at approximately the same levels shown in Table 3-2 for the foreseeable future. Simplot would evaluate whether another feasible (both technically and economically) action could be taken to reduce fluoride emissions to comply with the IDEQ's 2016 Consent Order to reduce exceedances of forage standards for fluoride.

Failure to obtain the Federal lands for expansion of the gypsum stacks would require Simplot to eventually reduce production rates at the Don Plant, which would result in reduced air pollutant emissions. If Simplot is unable to develop a feasible alternative strategy for gypsum disposal, the existing gypsum stack is projected to reach design capacity by 2031 and emissions associated with production at the Don Plant would end approximately 65 years sooner than under the action alternatives. Closure of the Don Plant would result in cessation of all point sources of air emissions associated with plant operations. Emissions from area and some mobile sources would continue for several decades during evaporation and draindown of the gypsum stacks and other closure activities.

3.3 Cultural Resources

Internal and external scoping for the Blackrock Land Exchange EIS identified the following cultural resource issue for analysis:

- How would the proposed land exchange and reasonably foreseeable actions affect management and protection of cultural resources, particularly for historic properties as defined by the National Historic Preservation Act (NHPA) (54 U.S.C. 300308)?

Section 3.4 (*Tribal Treaty Rights, Trust Responsibilities, and Tribal Resources*) provides additional information on tribal treaty rights and tribal uses associated with the Shoshone-Bannock Tribes.

3.3.1 Analysis Methods

3.3.1.1 Analysis Area

The analysis area for direct, indirect, and cumulative effects on cultural resources is the Federal and non-Federal lands, as defined in Chapter 2. These lands contain parcels where the proposed land exchange could affect Federal protection of cultural resources and where National Register of Historic Places (NRHP)-eligible properties on the Federal lands could be directly affected by reasonably foreseeable future actions. This analysis area contains the Area of Potential Effects being evaluated in consultation with the Idaho State Historic Preservation Office (SHPO) under Section 106 of the NHPA.

3.3.1.2 Assumptions

- Cultural sites recommended eligible for listing on the NRHP are assumed to be eligible for the NRHP and are considered historic properties for purposes of this analysis. The BLM will consult with the Idaho SHPO and other interested parties, as appropriate, regarding eligibility determinations.
- Based on recent Class III inventories conducted for the Blackrock Land Exchange EIS and review of previous inventories, the potential for undiscovered cultural sites in the analysis area is low. Therefore, this analysis assumes that there would be no adverse effects on undiscovered cultural sites from the land exchange or reasonably foreseeable actions on the Federal lands.

3.3.2 Affected Environment

A Class III cultural resources inventory was conducted on the Federal lands, the non-Federal lands, and voluntary mitigation Parcel A in 2019 to inform the Blackrock Land Exchange EIS and NHPA Section 106 consultation requirements (Logan Simpson 2019a). A cultural resource survey was also conducted for the 950-acre voluntary donation Parcel B (Logan Simpson 2019b). The inventories evaluated new and previously recorded cultural sites and made NRHP eligibility recommendations for each site. Sites recommended eligible for listing on the NRHP could be determined eligible by the Idaho SHPO and identified as historic properties.

The 2019 cultural resources inventory of the Federal lands, non-Federal lands, and voluntary mitigation Parcel A revisited four previously recorded sites (10BK212, 10BK274, 10PR93, and 10PR666) and identified five newly recorded sites (10BK416 [SB-01-CLC], 10PR978 [SB-02-CLC], 10BK417 [SB-01-HL], 10PR979 [SB-02-HL], and 10BK418 [SB-03-HL]) on the Federal lands, as shown in Table 3-5 (Logan Simpson 2019a). In total, three sites (10BK274, 10PR666, and 10PR979 [SB-02-HL]) on the Federal lands are eligible for the NRHP. Four previously recorded sites (10BK213, 10PR664, 10PR665, and 10PR667) could not be relocated during the 2019 inventory, likely because of the small number of artifacts identified during the original recording and low surface visibility at the recorded locations. Sites that could not be relocated and were determined ineligible based on prior evaluation remain ineligible for listing in the NRHP. Six sites (10BK212, 10BK213, 10PR93, 10PR664, 10PR665, and 10PR667) have been determined not eligible for the NRHP through previous agency consultation. Four of the newly recorded sites (10BK416 [SB-01-CLC], 10PR978 [SB-02-CLC], 10BK417 [SB-01-HL], and 10BK418 [SB-03-HL]) were recommended not eligible for the NRHP and do not require avoidance (Logan Simpson 2019a). While many of the cultural sites are not recommended as eligible for listing on the NRHP, they do provide important cultural history and significance for the Shoshone-Bannock Tribes. For example, a cave dwelling in the Wind Canyon cliffs area on the Federal lands is culturally significant to the Shoshone-Bannock Tribes, as it historically provided views of the surrounding landscape and the Tribes have indicated that it was used as a lookout point for providing warnings through smoke signals of any immediate dangers or other messages.

Table 3-5. Summaries and Recommendations for Cultural Sites on the Federal Lands

Site Number	Age	Description	Eligibility Recommendation
10BK212	Prehistoric	Lithic scatter	Not eligible (as determined through previous agency consultation)
10BK213	Prehistoric	Three flakes	Not eligible (as determined through previous agency consultation)
10BK274	Historic	Oregon Short Line railroad	Eligible, Criterion A
10PR93	Prehistoric	Lithic scatter and rockshelter	Not eligible (as determined through previous agency consultation)
10PR664	Prehistoric	Two flakes	Not eligible (as determined through previous agency consultation)
10PR665	Prehistoric	Small lithic scatter	Not eligible (as determined through previous agency consultation)
10PR666	Historic	Inscriptions	Eligible, Criteria A and D
10PR667	Prehistoric	One projectile point and a flake	Not eligible (as determined through previous agency consultation)
10BK416 (SB-01-CLC)	Historic	Features and artifact scatter	Not eligible
10PR978 (SB-02-CLC)	Historic	Inscriptions	Not eligible

Site Number	Age	Description	Eligibility Recommendation
10BK417 (SB-01-HL)	Historic	Artifact scatter with features	Not eligible
10PR979 (SB-02-HL)	Prehistoric	Artifact scatter	Eligible, Criterion D
10BK418 (SB-03-HL)	Historic	Artifact scatter with features	Not eligible

Source: Logan Simpson 2019a.

Site 10BK274 is a segment of the Oregon Short Line Railroad that was constructed between 1881 and 1884. The site occurs within BLM right-of-way IDI-001449, which is utilized by the Union Pacific Railroad with modern updates. In concurrence with previous evaluations, Site 10BK274 was recommended eligible for the NRHP under Criterion A during the 2019 inventory, in recognition of its association “with events that have made a significant contribution to the broad patterns of our history” (36 CFR 60.4(a)).

Site 10PR666 is a sandstone rock panel with historic inscriptions dating between 1914 and 2017. Many of the inscriptions are thought to have been created by sheepherders and cattlemen. At least two signatures were made by members of the Shoshone-Bannock Tribes. Site 10PR666 was recommended eligible for the NRHP under Criteria A and D during the 2019 inventory. Criterion A was applied because continued use of the area over time could indicate that the location is significant to local populations. Criterion D, which signifies sites that may yield “information important in prehistory or history” (36 CFR 60.4(d)), was applied because additional archival research could reveal connections to living persons of the area.

Site 10PR979 (SB-02-HL) is a prehistoric artifact scatter with a variety of artifact assemblages, fragments, and tools. Site 10PR979 (SB-02-HL) was recommended eligible for the NRHP under Criterion D during the 2019 inventory. The assemblage is small, but exhibits diversity of material and artifact types and has a moderate potential for buried cultural deposits. Additionally, the presence of groundstone could allow for phytolith, pollen, starch, and residue analyses. The site retains data potential, and could provide additional information about regional prehistoric research themes, such as subsistence strategies, site function, and mobility.

Under the NHPA, Federal agencies are responsible for preparing a Memorandum of Agreement (MOA) that sets out how the agency would address adverse effects of an undertaking on historic properties. An MOA that discussed management of Site 10PR666 was signed in 2009 by the BLM and the Idaho SHPO (BLM 2009). The agreement required that photographs of the site and signatures were to be taken and copies were to be provided to the Shoshone-Bannock Tribes. The BLM was also instructed to invite the Shoshone-Bannock Tribes to participate in collecting oral histories on the lands that would be exchanged. A traveling interpretive exhibit was then to be constructed. The Shoshone-Bannock Tribes chose not to sign the agreement, but continued to participate in the mitigation strategies identified therein. Additional photos were taken, an oral-history workshop was conducted (no oral histories were collected at that time), and a table-top interpretive display was created (BLM 2019d).

The 2019 Class III cultural resources inventory did not identify any NRHP-eligible historic properties on the non-Federal lands and voluntary mitigation Parcel A. The 2019 cultural resource inventory of the voluntary donation Parcel B area revisited one previously recorded site (77-17120) and identified three newly record sites (SS-01-CLC, SS-02-CLC, and SS-03-CLC) (Logan Simpson 2019b). All four of these sites identified in voluntary donation Parcel B (77-17120, SS-01-CLC, SS-02-CLC, and SS-03-CLC) are recommended not eligible for the NRHP (Table 3-6).

Table 3-6. Summaries and Recommendations for Cultural Sites on Voluntary Donation Parcel B

Site Number	Age	Description	Eligibility Recommendation
77-17120	Historic	Pipeline	Not eligible
SS-01-CLC	Historic	Road	Not eligible
SS-02-CLC	Historic	Ditch	Not eligible
SS-03-CLC	Historic	Road	Not eligible

Source: Logan Simpson 2019b.

The 2019 Surveys documented 15 historic isolated finds on the Federal lands, non-Federal lands, and voluntary donation Parcel A (Logan Simpson 2019a) and one historic isolated find on voluntary donation Parcel B (Logan Simpson 2019b) (see Table 3-7). None of the isolated finds were determined eligible for the NRHP; they have been fully recorded and no additional research or preservation is required.

Table 3-7. Isolated Finds on the Federal Lands, Non-Federal Lands, Voluntary Mitigation Parcel A, and Voluntary Donation Parcel B

Isolated Find	Description
IF01a	Prospect pit that measures 65 feet by 95 feet with a maximum depth of 4 feet. It appears to have been excavated by heavy machinery.
IF01b	Stoneware pipe fragment, a pail with lugs and a wire handle, a milled lumber fragment, and a porcelain fragment.
IF02	Concrete water catchment basin that measures 12.5 feet by 7 feet by 7 feet deep. A metal pipe is located at one corner and it was dry at the time of recordation.
IF03	An upright tobacco tin and a multi-serve sanitary can (crushed) in a 10-meter-diameter area.
IF04	Prospect pit that measures 33 feet by 18 feet with a maximum depth of 3 feet.
IF05	Two prospect pits excavated into a hillside. Pit 1 measures 25 feet by 115 feet and Pit 2 measures 25 feet by 60 feet.
IF06	Small trash scatter along a two-track road. Includes two crushed single-serve sanitary cans, two crushed multi-serve sanitary cans, a partial brick with the letters “B.B.Co” in the middle, one metal lid approximately 12 inches in diameter, and a clothing dryer with multiple bullet holes, all in a 15-meter-diameter area.
IF07	Mining adit and two spoil piles. The adit measures 9 feet by 11.5 feet with a maximum depth of 8 feet. Pile 1 measures 15 feet by 20 feet and Pile 2 measures 15 feet by 12 feet.
IF08	Old road/trail that runs along a hillside; age unknown; no associated artifacts.
IF09	Complete colorless glass bottle with an Owens-Illinois maker’s mark.
IF10	Colorless glass base fragment, no maker’s mark, colorless glass body fragment, and a partially crushed aluminum pull-tab can in a 10-meter area.
IF11	Earthen berm with excavated depression that extends to the south. It may be a water retention or erosion control feature. The berm measures 12.0 by 3.5 by 0.6 meters. Not present on historic General Land Office or U.S. Geological Survey maps. Unknown age/affiliation.
IF12	Colorless glass medicine bottle with a screw cap. Measures 3 2/16 by 1 1/16 inches.
IF13	Large multi-serve sanitary can, completely cut around, crushed. Has been shot with a rifle and shotgun.
IF14	Colorless glass bottle base and sidewall that are refitting pieces. The base has a Northwestern Glass Co. maker’s mark, which dates the bottle to between 1931 and the present.
IF15	A crushed 32 ounce sanitary can with a friction top lid and two strands of handtwisted barbed wire in a 15-meter area. The can is likely a lard can and has bullet holes.

Source: Logan Simpson 2019a, 2019b.

3.3.3 Direct and Indirect Effects

3.3.3.1 Proposed Action

Transfer of property containing NRHP-eligible sites out of Federal ownership “*without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance*” constitutes an adverse effect under 36 CFR 800.5(a)(2)(vii). Therefore, the proposed land exchange would constitute an adverse effect on NRHP-eligible Sites 10PR666 and 10PR979 (SB-02-HL), as these sites would be transferred out of Federal administration. A small segment of a much larger linear site, 10BK274, is part of the Union Pacific right-of-way. It is maintained, upgraded to modern standards, and still in use. Although this segment would be transferred out of Federal administration, the character of the site is not anticipated to change and there would be no effect on this site. In July 2019, the Idaho SHPO agreed to extend the life of the original, expired MOA to complete the remaining stipulations for site 10PR666, provided all parties were amenable (Idaho SHPO 2019). The BLM would either update the existing MOA or develop a new MOA to govern the resolution of adverse effects on historic properties on the Federal lands recommended as eligible for the NRHP. In addition to the Idaho SHPO and the BLM, the Shoshone-Bannock Tribes and Simplot will be invited signatories. Refer to Section 3.22 (*Mitigation*) for additional information about the MOA.

Making the Federal lands available for Simplot’s planned development activities would be an indirect effect of the proposed land exchange. Potential indirect effects of these reasonably foreseeable future actions on cultural resources are described in Section 3.3.4 (*Cumulative Effects*).

The nine isolated finds on the non-Federal lands during the 2019 inventory are not eligible for the NRHP and no additional research or preservation is required. The BLM would not gain any NRHP-eligible properties through the proposed land exchange. Therefore, no impacts are expected on cultural resources on the non-Federal lands as a result of the Proposed Action. If any cultural sites are discovered on the non-Federal lands in the future, they would be managed in accordance with Federal laws and regulations and the Pocatello RMP (BLM 2012), including allocation to use categories determined appropriate to maintain and preserve their educational, scientific, and public benefits.

3.3.3.2 Alternative A

Direct and indirect effects on cultural resources on the Federal lands would be the same as described for the Proposed Action.

The nine isolated finds documented on the non-Federal lands during the 2019 inventory are not eligible for the NRHP and no additional research or preservation is required. No cultural resources were identified on voluntary mitigation Parcel A. Therefore, no effects on cultural resources within the non-Federal lands are expected under Alternative A. If any cultural sites are discovered on these non-Federal lands in the future, they would be managed in accordance with Federal laws and regulations and the Pocatello RMP (BLM 2012).

If accepted, donation of voluntary donation Parcel B to the BIA or the Shoshone-Bannock Tribes under Alternative A would transfer responsibility for preservation and management of any cultural resources within voluntary donation Parcel B to the new landowner. The 2019 cultural resource inventory of the voluntary donation Parcel B area identified one isolated find and four cultural resource sites, but none of these sites are recommended as eligible for listing on the NRHP (Logan Simpson 2019b) and no additional research or preservation is required. Therefore, no impacts are expected on cultural resources if voluntary donation Parcel B is conveyed to the BIA or the Shoshone-Bannock Tribes.

3.3.3.3 Alternative B

Due to the reconfigured Federal lands boundary, the proposed land exchange would not adversely affect NRHP-eligible Site 10PR666 because it would be retained in Federal ownership. However, similar to the Proposed Action, Site 10BK274 would be transferred out of Federal administration. In addition, newly recorded Site 10PR979 (SB-02-HL) is within the Federal lands under Alternative B and the 2019 cultural resource inventory recommended this site as NRHP eligible under Criterion D. Transfer of NRHP-eligible Site 10PR979 (SB-02-HL) out of Federal administration would constitute an adverse effect.

Sites 10PR93, 10PR664, 10PR667, and 10PR978 (SB-02-CLC), which were determined not eligible for the NRHP, as well as the cave dwelling in the Wind Canyon cliffs area that is culturally significant to the Shoshone-Bannock Tribes, would also be retained in Federal ownership. Effects on other cultural sites from the proposed land exchange would be the same as described for the Proposed Action.

Direct and indirect effects on cultural resources on the non-Federal lands, voluntary mitigation Parcel A, and voluntary donation Parcel B would be the same as described for Alternative A.

3.3.3.4 No Action Alternative

Ongoing effects on the setting of cultural resources on the Federal lands associated with operation of the Don Plant would continue under the No Action Alternative. The BLM would continue to manage cultural resources on the Federal lands in accordance with Federal laws and regulations and the Pocatello RMP (BLM 2012). As a result, no additional effects on cultural resources on the Federal lands are anticipated under the No Action Alternative.

Based on the 2019 inventory, the nine historic isolated finds on the non-Federal lands are not eligible for the NRHP and have been fully recorded, and no additional research or preservation is required. As a result, no effects on cultural resources on the non-Federal lands are anticipated under the No Action Alternative. If any cultural sites are discovered on the non-Federal lands in the future, they would not be subject to Federal laws or regulations pertaining to cultural resources.

3.3.4 Cumulative Effects

3.3.4.1 Proposed Action

Past, present, and ongoing activities at the Don Plant have contributed to the cumulative degradation of the visual and auditory setting of cultural resources on the Federal lands, including cultural Sites 10PR666 and 10PR979 (SB-02-HL). If the land exchange is approved, the reasonably foreseeable construction of cooling ponds and gypsum stacks on the Federal lands may damage or result in permanent loss of cultural resources. Based on conceptual facility designs, NRHP-eligible Site 10PR666 and NRHP-ineligible Sites 10BK212, 10BK416 (SB-01-CLC), and 10PR978 (SB-02-CLC) are wholly or partially within the footprints of planned facilities, and are therefore anticipated to be damaged or destroyed during construction of the facilities. NRHP-eligible Sites 10BK274 and 10PR979 (SB-02-HL), and NRHP-ineligible Site 10PR93 are not within the footprints of the planned facilities, but would not be subject to protection under Federal laws and regulations, and could be damaged or destroyed in the course of future construction or operational activities. Because Site 10BK274 occurs within right-of-way IDI-001449, which is utilized by the Union Pacific Railroad, the character of this site is not anticipated to change in the reasonably foreseeable future. As stated in Section 3.3.3 (*Direct and Indirect Effects*), NRHP-eligible sites would be inventoried, recorded, and mitigated in accordance with an MOA prepared under NHPA requirements prior to their transfer out of Federal ownership.

There are no NRHP-eligible sites on the non-Federal lands and there are no direct or indirect effects on cultural resources anticipated on the non-Federal lands as a result of the land exchange. Additionally, no reasonably foreseeable actions were identified that could contribute to cumulative effects on the non-Federal lands. Therefore, the Proposed Action would not contribute to cumulative effects on cultural resources on the non-Federal lands.

3.3.4.2 Alternative A

Cumulative effects on cultural resources on the Federal and non-Federal lands would be the same as described for the Proposed Action.

3.3.4.3 Alternative B

NRHP-eligible Site 10PR666, NRHP-ineligible Sites 10PR93 and 10PR978 (SB-02-CLC), and the cave dwelling in the Wind Canyon cliffs area that is culturally significant to the Shoshone-Bannock Tribes would be retained in Federal ownership and, therefore, would not be damaged or destroyed from construction of the reasonably foreseeable actions of the cooling ponds and gypsum stacks on the Federal lands. Newly recorded Site 10PR979 (SB-02-HL) is within the Federal lands under Alternative B and the 2019 cultural resource inventory recommended this site as NRHP eligible under Criterion D; however, the reconfigured layout of the cooling ponds and gypsum stack expansions under Alternative B would avoid NRHP-eligible Site 10PR979 (SB-02-HL). This NRHP-eligible site would be inventoried, recorded, and mitigated in accordance with an MOA to be prepared under the NHPA requirements and/or protected through a deed restriction prior to transfer out of Federal ownership.

Cumulative effects on cultural resources on the non-Federal lands would be the same as described for Alternative A.

3.3.4.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on cultural resources and, therefore, would not contribute to cumulative effects.

3.4 Tribal Treaty Rights, Trust Responsibilities, and Tribal Resources

Internal and external scoping for the Blackrock Land Exchange EIS identified the following tribal and treaty rights issues for analysis:

- How would the proposed land exchange affect lands available for members of the Shoshone-Bannock Tribes to exercise their tribal treaty rights?
- How would the proposed land exchange and reasonably foreseeable actions affect tribal resources and uses?
- How would the proposed land exchange and reasonably foreseeable actions affect conditions on the Fort Hall Reservation (e.g., soundscape, visual setting)?

3.4.1 Analysis Methods

3.4.1.1 Analysis Area

The analysis area for direct effects on tribal treaty rights is the Federal and non-Federal lands, as defined in Chapter 2. These areas encompass lands where tribal treaty rights and tribal resources and uses could be affected by the proposed land exchange. The analysis area for indirect and cumulative effects on tribal treaty rights is the boundary of the BLM Pocatello Field Office, which encompasses the Fort Hall Reservation and unoccupied Federal lands within the BLM Pocatello Field Office boundary where off-reservation tribal treaty rights are reserved to members of the Shoshone-Bannock Tribes in accordance with the Fort Bridger Treaty of 1868.

3.4.1.2 Assumptions

- BLM-administered lands within the tribal treaty rights cumulative impacts analysis area that are occupied by phosphate mines and appurtenant facilities are considered to be temporarily unavailable for the exercise of off-reservation tribal treaty rights during operation of the mine.

3.4.2 Affected Environment

The Pocatello RMP (BLM 2012) requires that decisions affecting BLM-administered public lands be made in consideration of reserved off-reservation treaty rights on unoccupied Federal lands and the right for the Tribes to graze livestock and cut timber on Federal lands within the ceded boundary. Additionally, the plan directs the BLM to consult with tribal governments on land management actions and allocations that could affect treaty rights.

The NHPA and its implementing regulations (36 CFR 800) require consultation with federally recognized Indian tribes to identify traditional cultural properties and consider potential effects on such properties because of a Federal undertaking. In addition, the American Indian Religious Freedom Act, Executive Order 13175, “Consultation and Coordination with Indian Tribal Governments,”⁶ and Executive Order 13007, “Indian Sacred Sites,”⁷ contain requirements for consulting with tribes on the potential effects of Federal actions on tribal interests. Traditional cultural properties are cultural sites of religious or cultural importance that may also be eligible for the NRHP because of their importance in the traditions and cultural identity of a cultural group. Areas of traditional use may include areas used to gather plants, animals, or fish for subsistence or for ceremonial or medicinal purposes.

The BLM recognizes the Shoshone-Bannock Tribes’ Policy for Management of Snake River Basin Resources including the Tribes’ determination to pursue and promote efforts to restore the Snake River systems and affected unoccupied lands to a natural condition and their desire to ensure the protection, preservation, and enhancement of tribal treaty rights and interests.

The Federal Government has a unique trust relationship with federally recognized American Indian tribes, including the Shoshone-Bannock Tribes. The BLM has a responsibility and obligation to consider and consult on potential effects on natural resources related to the Tribes’ treaty rights, uses, and interests under the Federal laws, executive orders, and treaties noted above. Resources or issues of interest to the Shoshone-Bannock Tribes that could have a bearing on their traditional use or treaty rights include tribal historic and archaeological sites, sacred sites and traditional cultural properties,

⁶ 65 Federal Register 67249, November 6, 2000.

⁷ 61 Federal Register 26771, May 24, 1996.

traditional use sites, fisheries, traditional use plant and animal species, vegetation (including noxious and invasive, nonnative species), air and water quality, wildlife, access to lands and continued availability of traditional resources, land status, and the visual quality of the environment.

3.4.2.1 Tribal Coordination and Consultation History

During the preparation of the 2007 Blackrock Land Exchange EA, the BLM consulted and coordinated with various groups and entities, including the Shoshone-Bannock Tribes. BLM staff attended various meetings with the Shoshone-Bannock Tribes' Environmental Staff, often to provide the Tribes updates on the land exchange proposal, answer questions from the Tribes, and address concerns. On November 22, 2004, the Idaho State Historical Society's SHPO sent a letter to Richard Hill (archaeologist from the BLM Upper Snake Field Office), stating that because there would be adverse impacts on two NRHP-eligible properties, an MOA was required. Further testing occurred at one of those properties before the MOA was finalized, and it was determined that that site was ineligible. The *Memorandum of Agreement Between the Bureau of Land Management, Pocatello Field Office and the Idaho State Historic Preservation Office for the Land Exchange between the J.R. Simplot Corporation and the Pocatello Field Office, Idaho Falls District Bureau of Land Management* was issued in October 2009, and included one NRHP-eligible property—Site 10PR666. The Tribes were willing to work with the BLM staff to implement mitigation measures identified in the MOA, but they chose not to sign the document because they did not support the exchange.

Following the release of the Finding of No Significant Impact for the Blackrock/Simplot land exchange in 2007, the Shoshone-Bannock Tribes sent a letter to the BLM Pocatello Field Office protesting the findings. The Tribes requested a stay of the proposed land exchange and any activities to advance the land exchange, pending the final decision of their protest and related appeals. The Tribes stated that an EIS, not an EA, was appropriate to meet NEPA regulations and allow for a full analysis of the proposed land transfer. Consequently, the Tribes challenged the BLM's decision in court. On May 3, 2011, the United States District Court for the District of Idaho found that the EA was inadequate and violated NEPA, and that the BLM was required to prepare an EIS (*Shoshone Bannock Tribes of Fort Hall Reservation v. United States Department of the Interior et al.* 2011).

As a result of the court decision, Simplot and the BLM decided to reevaluate the proposed land exchange with an EIS. In December 2018 and March 2019, the BLM and Tribes attended staff-to-staff meetings. These meetings allowed the Tribes to ask questions and express concerns regarding the proposed land exchange. In March 2019, the BLM, the Tribes, and the Fort Hall Business Council initiated government-to-government consultations to discuss the process of moving forward with an EIS to evaluate the land exchange. The Tribes and the Council had various concerns with the proposed land exchange, including compensation for the Tribes, further degradation of natural resources as a result of expanding the Don Plant's operations, impacts on cultural resources, and the Tribes' rights under the 1868 Fort Bridger Treaty. In April 2019, the BLM re-initiated consultation under Section 106 with the Tribes for the proposed Blackrock Land Exchange.

3.4.2.2 Tribal Treaty Rights and Tribal Resources

Both the Federal and non-Federal lands are within the ceded boundary of the Fort Hall Indian Reservation. Provisions of the 1868 Fort Bridger Treaty state that tribes "...will make said reservations their permanent home, and they will make no permanent settlement elsewhere; but they shall have the right to hunt on the unoccupied lands of the United States so long as game may be found thereon..." In addition to these rights, the Agreement of February 5, 1989, ratified by the Act of June 6, 1900 states: "So long as any of the lands ceded, granted and relinquished under this treaty remain part of the public

domain, Indians belonging to the above mentioned tribes, and living on the reduced reservation shall have the right, without any charge therefor, to cut timber for their own use, but not for sale, and to pasture their livestock on said public lands, and to hunt thereon and to fish in the streams thereof.” The proposed exchange lands are within the area ceded to the Federal Government. Federal lands are therefore available for members of the Shoshone-Bannock Tribes to exercise their off-reservation treaty rights. Although they are within the ceded reservation boundary, the non-Federal lands are not available for exercise of off-reservation treaty rights because they are privately owned.

As described in Section 3.3 (*Cultural Resources*), Site 10PR666 is a sandstone rock panel located on the Federal lands with historic inscriptions dating between 1914 and 2017, including by members of the Shoshone-Bannock Tribes. During preparation of the previous EA for the land exchange, an MOA that discussed management of Site 10PR666 was signed in 2009 by the BLM and the Idaho SHPO (BLM 2009). The MOA required several mitigation strategies including site photographs, an oral-history workshop, and a table-top interpretive display (BLM 2019d). These mitigations strategies were completed; however, no oral histories were collected after the workshop.

The Tribes place great intrinsic value on the Howard Mountain area and the Federal lands offered for exchange. The Tribes value the area for its uniqueness and the relation their people have with the natural surroundings. Before the development of the Pocatello area, the Tribes occupied the land and valued the area as an important wintering ground. The Tribes used the area for camps and other uses. The Federal lands also offer a vantage point and viewshed for the Tribes. In their scoping comments, the Shoshone-Bannock Tribes indicated that the area was once described by Shoshone-Bannock elders as “a place where one seeks songs” because the high mountains and swirling winds create optimum conditions that inspire songs (BLM 2019e).

The Shoshone-Bannock Tribes continue to actively use the lands and resources outside of the reservation to the extent possible, retain traditions and connections with the lands, and maintain connections with sacred sites. In their scoping comments, the Shoshone-Bannock Tribes claim that sacred sites in the area of the Federal lands include possible burial sites, rock art, monumental rock features, natural features, rock structures or rings, sweat lodges, timber and brush structures, eagle traps, and prayer and offering localities (BLM 2019e). Much of the landscape itself figures prominently in the identity and traditions of the native groups, and sacred places are not necessarily defined by archaeological remains (BLM 2018). Other resources that the Shoshone-Bannock Tribes claim exist in the area of the Federal lands include spring sites; camp sites; healing locations; battleground sites; hunting, fishing, and gathering locations; scenery and visual resources; and audio resources. The Tribes also value landscape features in the Federal lands proposed for exchange including Howard Mountain and canyons surrounding the mountain that have long held significance for the Shoshone-Bannock Tribes (BLM 2019e).

Fish are an important food and economic resource for the Shoshone-Bannock Tribes. The harvest and consumption of fish also contribute to tribal culture and spirituality. Because of water quality’s effects on fish and fisheries, water quality is important to the Shoshone-Bannock Tribes and other tribes in Idaho. Water quality affects the health of fish populations, the level of contaminants in fish, and the consequent health risks posed by these contaminants to tribal members when they consume fish (EPA 2016b). The Idaho Department of Health and Welfare maintains fish consumption advisories for the Portneuf River and the American Falls Reservoir due to mercury (IDHW 2019). High levels of mercury can accumulate in fish and result in adverse health impacts on those who consume fish regularly. Refer to Section 3.16 (*Fish and Wildlife*) and Section 3.17 (*Water Resources*) for additional information on fisheries and water quality. Currently, members of the Shoshone-Bannock Tribes have one grazing permit #1102953 where treaty rights are exercised on BLM-administered lands within the Pocatello

Field Office. The permit includes two grazing allotments, Rocks (#16086) and 2½ Mile (#06094), neither of which overlap the lands proposed for exchange. Use on the Rocks allotment consists of 436 cattle from April 23 to June 15. Use on the 2½ Mile allotment consists of 36 cattle from May 10 to October 18 and one horse from May 10 to November 15.

The Pocatello Field Office's Forestry Program issues free use permits to members of the Shoshone-Bannock Tribes for wood products (firewood, tepee poles, or Christmas trees) and greenery (plants). From 2013 to the present, approximately 17 tribal free use permits have been issued (16 for wood products and one for greenery); however, the locations of use are not documented. Two yearly permits were issued in 2017 and one permit in 2018. The permit does not limit the amount gathered under tribal use; therefore, the amount gathered is not documented (BLM 2019f).

In meetings and comments with the BLM, members of the Shoshone-Bannock Tribes have expressed concern about the effects of past and ongoing operations of the Don Plant and proposed expansions on the lands, waters, and inhabitants of the Fort Hall Reservation. Fish is an important component of tribal diets. If water quality is adversely affected by planned facilities on the Federal lands, it could have negative impacts on the health of tribal members. The Tribes have also raised concern regarding levels of selenium and mercury in plants on the Fort Hall Reservation, and potential adverse effects on bison, horses, and cows that graze the tribal lands. As indicated in Table 3-8, analytical testing results of the existing gypsum stack slurry indicate a relatively small amount of mercury (0.0002U–0.017 milligram per liter [mg/L]) and selenium (0.0451–1.23 mg/L).

Tribal staff requested that a study be conducted to determine the impacts of glyphosates⁸ and phosphates from fertilizer manufacture at the Don Plant on water quality in the Portneuf River. The Tribes have also expressed concerns about wildlife displacement, culturally significant areas, and decreased land values resulting from the proposed Blackrock Land Exchange (BLM 2019g).

3.4.3 Direct and Indirect Effects

3.4.3.1 Proposed Action

The proposed land exchange would result in a net loss of 52 acres of land and a change in the location of lands that would be available to the Shoshone-Bannock Tribes to exercise their off-reservation treaty rights. The Tribes have stated that they hold fundamental value in this area. If the Federal land is no longer accessible to the Tribes, they would lose valuable historical and spiritual attributes associated with that land. In their scoping comments, the Shoshone-Bannock Tribes claim that sacred sites in the area of the Federal lands include possible burial sites, spiritual sites, spring sites, camp sites, healing locations, viewsheds, and oral histories, as well as hunting, fishing, and gathering locations could be lost (BLM 2019e). Furthermore, the 719 acres of Federal lands would no longer be accessible for other tribal uses after the land exchange, such as livestock grazing and gathering of ceremonial plants. As described in Section 3.3 (*Cultural Resources*), transfer of NRHP-eligible Sites 10PR666 and 10PR979 (SB-02-HL) out of Federal ownership would constitute an adverse effect on the property under 36 CFR 800.5(a)(2)(vii). NRHP-eligible sites would be inventoried, recorded, and mitigated in accordance with an MOA prepared under NHPA requirements prior to their transfer out of Federal ownership. In addition, other cultural sites or resources that are not historic properties or eligible for the NRHP may have value to the Shoshone-Bannock Tribes that would be lost as a result of the proposed land exchange.

⁸ Glyphosates are not manufactured at the Don Plant.

If the Proposed Action were approved, the 667 acres of the non-Federal lands acquired by the BLM would be available for the exercise of off-reservation treaty rights. Although the non-Federal lands may support the same general activities as the Federal land (e.g., opportunities for hunting, fishing, gathering, and livestock grazing), the non-Federal lands likely do not contain the same tribal significance as the Federal lands (e.g., cultural sites, possible burial sites, viewsheds, audio sites). The non-Federal lands are approximately 16 miles away from the Fort Hall Reservation, whereas the Federal lands are directly adjacent to the Fort Hall Reservation.

3.4.3.2 Alternative A

Impacts on tribal treaty rights and trust responsibilities would be the same as described for the Proposed Action for the 719 acres of Federal lands and 667 acres of non-Federal lands. However, Alternative A also includes 160 acres of voluntary mitigation and 950 acres of voluntary donation, which would help mitigate adverse impacts on tribal treaty rights and uses compared to the Proposed Action, including:

- 160 acres of private land that would be included as voluntary mitigation (Parcel A), which would be transferred to the BLM and available for exercise of off-reservation treaty rights in the vicinity of other non-Federal lands exchanged in the Blackrock and Caddy Canyon Areas. Inclusion of voluntary mitigation Parcel A would result in a net increase of 108 acres of land that would become available for exercise of off-reservation treaty rights, compared to the Proposed Action that would result in a net reduction of 52 acres of such lands.
- 950 acres of private land within the Fort Hall Reservation that would be included as voluntary donation (Parcel B), which Simplot has proposed to offer for donation to the BIA for the benefit of the Shoshone-Bannock Tribes or to the Shoshone-Bannock Tribes directly, provided the land exchange is approved and any administrative or judicial appeals have been resolved. The voluntary donation Parcel B lands include approximately 200 acres of irrigated agricultural lands that could be incorporated into the tribal Agricultural Resource Management Plan. If Parcel B was to be conveyed to the BIA, the management plan for the 200 acres of farmland would include inventory, planning, improvements, protection, leasing and permitting, and contract monitoring. Voluntary donation Parcel B also includes approximately 750 acres of improved rangeland, which may provide areas for livestock grazing, access to riparian areas along certain segments of Michaud Creek, and other uses. If Parcel B was to be conveyed to the BIA, the management plan for the 750 acres of improved rangeland would include inventory, range planning, rangeland improvements, rangeland protection, and leasing and permitting services.

Overall, Alternative A would result in a net gain of 108 acres of lands available for exercise of off-reservation treaty rights and 950 acres of lands available for use by the Tribes within the Fort Hall Reservation. As a result, Alternative A would generally reduce adverse impacts on tribal treaty rights and tribal resources compared to the Proposed Action and would help support policies and purposes in the Shoshone-Bannock Land Use Policy Ordinance, compared to the Proposed Action (Shoshone-Bannock Tribes 2010).

3.4.3.3 Alternative B

Impacts on tribal treaty rights, trust responsibilities, and tribal uses would generally be the same as described for Alternative A, as the total Federal land acreage is only 8 acres fewer than the Proposed Action and Alternative A, and Alternative B also includes the proposed conveyance of voluntary mitigation Parcel A and voluntary donation Parcel B. However, the Federal land area in Alternative B was reconfigured so that NRHP-eligible Site 10PR666 and the surrounding area would be retained under

Federal ownership and could be used by members of the Shoshone-Bannock Tribes. Additionally, Sites 10PR93, 10PR664, 10PR667, and 10PR978 (SB-02-CLC), which were determined not eligible for the NRHP, as well as the cave dwelling in the Wind Canyon cliffs area that is culturally significant to the Shoshone-Bannock Tribes, would also be retained in Federal ownership. As a result, Alternative B would reduce potential impacts on tribal uses when compared to the Proposed Action and Alternative A.

3.4.3.4 No Action Alternative

The Federal lands would remain available for the exercise of off-reservation treaty rights by the Shoshone-Bannock Tribes. The non-Federal lands and voluntary mitigation Parcel A would remain under private ownership and unavailable for off-reservation treaty rights. Ongoing effects on tribal lands and tribal resources associated with operation of the Don Plant would continue under the No Action Alternative as described in Section 3.4.2 (*Affected Environment*) above.

3.4.4 Cumulative Effects

3.4.4.1 Proposed Action

Past and present activities in the cumulative analysis area have affected the ability of the Tribes to exercise treaty rights and have contributed to the cumulative degradation of tribal uses and resources including cultural resource sites; visual resources; the natural soundscape (audio sites); and hunting, harvesting, wood gathering, and livestock grazing opportunities. Past and present actions that have resulted in cumulative impacts on tribal treaty rights and tribal resources in the cumulative analysis area include:

- Past and present activities associated with phosphate mining and appurtenant facilities, which cover an estimated 21,452 acres the cumulative impacts analysis area. These areas are considered to be temporarily unavailable to the exercise of off-reservation tribal treaty rights due to ongoing mining and other activities in these areas. The duration of effects on tribal treaty rights and tribal resources in these areas could persist until successful reclamation is completed.
- Past land tenure adjustments by the BLM that affect the provisions of the 1868 Fort Bridger Treaty, which reserves rights to members of the Shoshone-Bannock Tribes to practice hunting, gathering, fishing, and other traditional uses on all unoccupied public lands within the Pocatello Field Office boundary. Since 1994, when the land exchange proposal was submitted, the BLM has completed 14 land tenure adjustments in the Pocatello Field Office boundary, including 13 acquisitions and 1 disposal, for a total net gain of 3,779 acres of public lands in the Pocatello Field Office boundary. This increase in public lands within the Pocatello Field Office boundary has increased the public lands available for the Shoshone-Bannock Tribes to exercise treaty rights.
- Past and present contamination of resources associated with mining, industrial activity, and other projects that can affect resources important to the Tribes such as water quality, biological resources, and air quality. Projects and contamination sites within the cumulative impacts analysis area that have affected resources important to the Tribes include the Gay Mine, which was located on the Fort Hall Reservation and has been in reclamation since 1993, and the EMF Superfund Site where site cleanup is ongoing.
- Unoccupied lands within the cumulative impact analysis area that are no longer available for exercise of treaty rights or tribal uses due to homesteading, statehood, and other statutes that have allowed Federal land to be converted into non-Federal ownership.

These past and present activities in the cumulative analysis area have also cumulatively affected the ability of the Shoshone-Bannock Tribes to meet certain purposes and objectives in the Shoshone-Bannock Land Use Policy Ordinance (Shoshone-Bannock Tribes 2010).

The Proposed Action would result in a net loss of 52 acres of Federal land that would enter private ownership and would no longer be available for the Tribes to exercise off-reservation treaty rights, which would contribute to cumulative impacts when combined with other past and present actions described above.

If the land exchange is approved, the reasonably foreseeable construction of cooling ponds and gypsum stack expansions on the Federal lands may damage or result in further loss or degradation of tribal resources that are important to the Shoshone-Bannock Tribes. The construction of these facilities would alter the existing topography and replace the existing natural landscape with industrial facilities on approximately 290 acres of the Federal lands. These actions would alter the condition and character of the Federal lands, as historically used and valued by the Tribes. As described in Section 3.3 (*Cultural Resources*), NRHP-eligible Site 10PR666 is within the footprint of the planned west gypsum stack expansion. Although information from Site 10PR666 would be salvaged through mitigation activities, the physical site is anticipated to be destroyed in the course of gypsum stack expansion. NRHP-eligible Site 10PR979 (SB-02-HL) is not within the footprint of the planned facilities, but would not be subject to protection under Federal laws and regulations, and could be damaged or destroyed in the course of future construction or operational activities. Other cultural sites or resources that are not historic properties or eligible for the NRHP that are important to the Tribes could also be destroyed or degraded during construction of the facilities.

If the Proposed Action is approved, Simplot estimates that the operational life of the Don Plant and the expanded gypsum stack system would be approximately 65 years, until 2084. This would increase the duration of ongoing effects from operation of the Don Plant within the Off-Plant Operable Unit of the EMF Superfund Site, which includes portions of the Fort Hall Reservation and ceded lands in Federal ownership used by the Tribes. These effects would result from ongoing activities that degrade the soundscape and visual setting in the area of the Federal lands and areas of the Fort Hall Reservation adjacent to the Federal lands, and activities that contaminate soils (see Section 3.13), vegetation (see Section 3.14), and groundwater and surface water (see Section 3.17). However, downward trends observed in environmental contaminants of concern from ongoing implementation of environmental controls are expected to continue, as described in Section 3.14 (*Vegetation*) and Section 3.17 (*Water Resources*). Construction of the cooling ponds, as facilitated by the Proposed Action land exchange, would decrease fluoride emissions from the Don Plant and deposition on vegetation and soils in the surrounding lands as described in Section 3.2 (*Air Quality and Climate Change*).

The gypsum stack slurry in the expanded gypsum stacks would have similar chemical concentrations as the existing gypsum stack slurry (see Table 3-8), which include mercury and other contaminants, as well as phosphorous, that have potential to affect water quality and fisheries. The reasonably foreseeable actions on the Federal lands would result in incremental increases in concentrations of contaminants in groundwater and connected surface water resources; however, the estimated magnitude of effects on water quality resulting from the reasonably foreseeable actions, including leakage of mercury, arsenic, and phosphorus, described in Section 3.17 (*Water Resources*), are not anticipated to adversely affect fisheries relative to baseline water quality conditions and declining trends in total concentrations of various contaminants from ongoing application of source controls and remedial actions at the Don Plant. Current fish consumption advisories for the Portneuf River and the American Falls Reservoir would remain in effect as long as deemed necessary by the Idaho Department of Health and Welfare.

3.4.4.2 Alternative A

Cumulative effects on tribal treaty rights, trust responsibilities, and tribal uses would be the same as described for the Proposed Action for the Federal and non-Federal lands. However, conveying 160 additional acres of private property to the BLM (voluntary mitigation Parcel A) and offering to donate 950 acres of private property to the BIA or to the Shoshone-Bannock Tribes (voluntary donation Parcel B) would help mitigate adverse impacts on tribal treaty rights and uses from the land exchange and reasonably foreseeable actions. Therefore, cumulative effects on tribal treaty rights, trust responsibilities, and tribal uses would be less under Alternative A than under the Proposed Action and would help support policies and purposes in the Shoshone-Bannock Land Use Policy Ordinance, compared to the Proposed Action (Shoshone-Bannock Tribes 2010).

3.4.4.3 Alternative B

Cumulative effects on tribal treaty rights, trust responsibilities, and tribal uses would generally be the same as described for Alternative A, except with the reconfigured Federal lands boundary, NRHP-eligible Site 10PR666 would remain in BLM ownership and the Shoshone-Bannock Tribes would still be able to access this site. NRHP-eligible Site 10PR666, NRHP-ineligible Sites 10PR93 and 10PR978 (SB-02-CLC), and the cave dwelling in the Wind Canyon cliffs area that is culturally significant to the Shoshone-Bannock Tribes would be retained in Federal ownership and, therefore, would not be damaged or destroyed from construction of the reasonably foreseeable actions of the cooling ponds and gypsum stacks on the Federal lands. The reconfigured footprint of the planned gypsum stack would avoid NRHP-eligible Site 10PR979 (SB-02-HL). This NRHP-eligible site would be inventoried, recorded, and mitigated in accordance with an MOA to be prepared under the NHPA requirements and/or protected through a deed restriction prior to transfer out of Federal ownership.

The location of the gypsum stack expansions and associated releases of fluoride and particulate matter emissions would be situated farther east than under the Proposed Action, which may result in comparatively lower ambient concentrations of fluoride and particulate matter, as well as lower fluoride in forage concentrations, on lands within the Fort Hall Reservation.

3.4.4.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on cultural resources and, therefore, would not contribute to cumulative effects.

3.5 Geotechnical Stability

Internal and external scoping for the Blackrock Land Exchange EIS identified the following issue for analysis:

- What are the risks and potential consequences of a gypsum stack or cooling pond slope failure due to slope instability, seismic loading, overtopping, or other factors?

3.5.1 Analysis Methods

3.5.1.1 Analysis Area

The analysis area for direct, indirect, and cumulative effects on geotechnical stability is the extent of the Federal and non-Federal lands. This encompasses the proposed land exchange areas and the location of the planned gypsum stack expansions and cooling ponds on the Federal lands. The stability of the

gypsum stack expansions and the cooling ponds is the only identified geotechnical stability concern associated with the proposed land exchange and reasonably foreseeable actions.

3.5.1.2 Assumptions

- The planned gypsum stack expansions and the cooling ponds on the Federal lands would be designed, built, and operated to maintain stability with an adequate factor of safety based on their hazard classifications and in accordance with applicable rules, standards, and design requirements.

3.5.2 Affected Environment

The Federal lands are located in the Howard Mountain area near the northern limit of the Bannock Range. The mountainous terrain features steep slopes and canyons and varies in elevation from about 4,500 to 5,500 feet above mean sea level. The surface varies from exposed andesite bedrock to shallow, rocky soil to deeper, colluvial deposits in the canyons. Refer to Section 3.11 (*Geology and Paleontology*) for additional information on geology underlying the analysis area.

Simplot identified a phosphogypsum release from the east abutment of the existing gypsum stack in 2013 onto adjacent BLM-administered land due to erosional piping and subsidence of the perimeter dike. Two subsequent releases occurred in 2015 and 2016. Simplot excavated the released phosphogypsum materials, which affected approximately 0.1 acre, returned them into the gypsum stack system, covered residual released material with native soil, and regraded the exterior slope of the perimeter dike for stability. The leaks in 2013 and 2016 and the breach of 2015 occurred prior to the lining of the upper east compartment of the stack. The releases were reported to the IDEQ and the remedial actions were conducted with the IDEQ's oversight and approval. Remediation began in 2017 and was completed in 2019 (Simplot 2019k). Additional information on these releases is provided below.

On August 27, 2013, a release of gypsum stack process water was discovered to have leaked through a gypsum dike onto Federal lands adjacent to the gypsum stack; however, there was no dike breach. The water had channeled through porous native materials used to construct the relatively new dike. Based on the estimated volume of 52,900 gallons and a leakage rate of 10 gallons per minute, the duration of the release would have been about 3.7 days. The release was addressed immediately, and the low-pH water was pumped back into the gypsum stack. Due to construction restraints and planned dewatering of this portion of the gypsum stack for lining, a discharge was pumped back to the stack from this area at least weekly until June 11, 2015, after which the area remained dry.

On November 22, 2015, approximately 250,000 gallons of gypsum and stack process water was released onto the Federal lands adjacent to the gypsum stack. This release was due to the low-pH stack water reacting with natural calcareous soils used to construct a section of the dike, ultimately eroding into a "breach" of the dike. The breach was several feet wide and several feet deep. The duration of this release was likely only a few hours once the water had channeled through the dike. The release was addressed immediately, and the low-pH water was pumped back into the gypsum stack. The dike was repaired with non-reactive phosphogypsum.

On January 22, 2016, approximately 6,000 gallons of gypsum and stack process water was released onto the same BLM land adjacent to the stack; however, there was no dike breach. The release was due to overtopping an adjacent process channel. The release was addressed immediately, and the low-pH water was pumped back into the gypsum stack.

Simplot submitted a remediation work plan to the IDEQ for the Federal lands on March 31, 2016. The work plan was approved by the IDEQ in consultation with the BLM on July 24, 2017. Thorough

excavation of the deposited phosphogypsum and interim stabilization efforts with agency oversight were completed by December 2017. The IDEQ approved the final remediation in consultation with the BLM in June 2018. Placement of native soil cover and restoration of the BLM land was completed by December 2018. The BLM boundary fence was repaired/replaced in January 2019 and a completion report was issued to the BLM and IDEQ in February 2019.

3.5.3 Direct and Indirect Effects

There would be no direct effects on geotechnical stability from the Proposed Action or alternatives. Making the Federal lands available for Simplot's planned development activities would be an indirect effect of the proposed land exchange under all the action alternatives. Potential effects of these reasonably foreseeable future actions on geotechnical stability are described in Section 3.5.4 (*Cumulative Effects*).

The No Action Alternative would have no direct or indirect effects on geotechnical stability; however, Simplot's use of the existing gypsum stack system at the Don Plant would continue.

3.5.4 Cumulative Effects

3.5.4.1 Proposed Action

Simplot has stated that *"The proposed gypsum stack construction will follow Simplot's current construction process..."* Simplot would build the proposed gypsum stack expansions using an upstream method of construction, in which settled gypsum deposits are used to incrementally raise the perimeter containment dike. The gypsum stack expansions would be underlain by a low-permeability liner. Although the designs for the gypsum stack expansions have not yet been completed, the gypsum stack design concepts provided in the feasibility study show downstream slopes of 3:1 (horizontal:vertical) (Simplot 2019I; HDR, Inc. 2018). The cooling pond perimeter embankments would consist of compacted earthen fill. Each cooling pond would have a composite liner system. The cooling ponds concept design shows 2:1 upstream slopes and 1.5:1 downstream slopes (Simplot 2019I; HDR, Inc. 2018). Refer to Appendix E (*Feasibility Study*) for additional information on the conceptual designs of the gypsum stack expansions and the cooling ponds. If the land exchange is approved, the IDEQ will review and approve the designs and supporting documentation for any new gypsum stack in accordance with the aforementioned 2008 and 2016 Consent Orders between Simplot and IDEQ (IDEQ 2008a, 2016). Information required to fulfill the requirements of these Consent Orders will likely be more detailed and may differ from information provided to the BLM in Appendix E for purposes of the Blackrock Land Exchange EIS.

Simplot has not yet completed stability analyses for the reasonably foreseeable gypsum stacks and cooling ponds. Further assessment of stability of these reasonably foreseeable actions would be conducted during and after final engineering and in accordance with the existing Consent Orders, which require a stability analysis as well as a technical evaluation of the methods and specifications for lining the new features. Simplot has confirmed that *"Any gypsum stack or cooling pond expansion areas that will be constructed in the future will be designed with a minimum static factor of safety of 1.5, which is the current engineering standard for earthen and gypsum containment dikes. The minimum dynamic factors of safety will be equal to or greater than 1.0 for the existing site conditions"* (Simplot 2019I).

The gypsum stacks and cooling ponds would be designed so that no runoff from the surrounding slopes would enter the impoundments, only direct precipitation within their respective footprints.

Table 3-8 presents analytical testing results of the gypsum stack slurry. Table 3-8 presents ranges of measured concentration values for analytes where multiple testing results were available.

Table 3-8. Analytical Results of Gypsum Stack Slurry

Parameter	Concentration Value (mg/L)
Aluminum	51–422
Ammonia	318
Antimony	0.0892 UJ–<0.05
Arsenic	0.205–0.51
Barium	0.664–0.95
Beryllium	0.0199–0.026
Boron	10J
Cadmium	2–7.1
Calcium	1400–5936
Chloride	162
Chromium	5.31–19.8
Cobalt	0.0379–<0.05
Copper	0.77–7.2
Fluoride	8480J
Iron	32.4–82
Lead	0.0086J–0.71
Total Gross Alpha	644 pCi/L
Total Gross Beta	619 pCi/L
Lithium	0.354
Magnesium	55.5–165
Manganese	1.48–1.67
Mercury	0.0002U–0.017
Molybdenum	0.0742
Nickel	1.68–2.12
Phosphorous	2460
Potassium	176–451
Selenium	0.0451–1.23
Silver	0.0084 UJ–0.56
Sodium	768–1239
Sulfate	4480
Thallium	0.0251 J–<0.05
Vanadium	3.81–27.6
Zinc	12.6–22

Sources: Bechtel 1996; Simplot 2005

Note: Variations in the range of sampled concentrations are the result of different sampling collection and testing methods.

J = estimated, pCi/L = picocuries per liter, U = no quantifiable concentration found above detection limit

Simplot expects the water in the proposed cooling ponds to be similar to the water currently circulated to the cooling towers. Table 3-9 reports ranges of concentrations for chemical parameters in the cooling towers as monitored by Simplot and the EPA (Simplot 2005, 2008, 2013, 2019).

Table 3-9. Analytical Results of Existing Cooling Tower Water

Parameter	Concentration Value
pH	<2 ²
Diphosphorus pentoxide, P ₂ O ₅	0.07–1.4% ¹
Fluorine, F-	0.5–2.5% ¹
Aluminum, Al	20–500 ppm ¹
Arsenic, As	0.11–0.47 ppm ²
Barium, Ba	Not detected–0.37 ppm ²
Beryllium, Be	Not detected ²
Calcium, Ca	100–500 ppm ¹
Cadmium, Cd	0.12–5.8 ppm ¹
Chromium, Cr	0.57–28.79 ppm ¹
Copper, Cu	Not detected ¹
Iron, Fe	10–320 ppm ¹
Lead, Pb	Not detected–0.18 ppm ²
Magnesium, Mg	125–450 ppm ¹
Mercury, Hg	Not detected–0.02 ppm ²
Nickel, Ni	Not detected–6.0 ppm ¹
Potassium, K	30–300 ppm ¹
Selenium, Se	Not detected ²
Silicon, Si	2,500–6,550 ppm ¹
Sodium, Na	200–600 ppm ¹
Thallium, Tl	Not detected ²
Vanadium, V	0.7–40 ppm ¹
Zinc, Zn	Not detected–65 ppm ¹

¹ Source: Simplot 2019I. These values represent ranges in concentrations for analytes that Simplot routinely monitors and represent the range in concentrations from October 1, 2018, through October 1, 2019.

² Source: Simplot 2005, 2008, 2013. These values represent ranges in concentrations for analytes measured by the EPA that Simplot does not monitor. It is important to note that significant cooling tower process changes have occurred since 2013 that would likely result in reductions in the concentrations that are reported in Table 3-9. Specifically, the flash coolers for the digester have been isolated from the cooling tower circuit.

ppm = parts per million

The analytical results reported in Table 3-8 and Table 3-9 are intended to disclose constituents within the gypsum stack slurry and cooling water that may be of concern if an uncontrolled release of these fluids into the environment occurred through failure of a gypsum stack or cooling pond. Leakage of certain constituents through the gypsum stack and cooling pond liner and associated impacts on water quality were evaluated through the conceptual site model described in Appendix H (*Water Resource Technical Report*).

A formal failure mode effects analysis has not been completed for the reasonably foreseeable actions; however, potential failure modes for the gypsum stacks and cooling ponds may include a stability failure of their embankments or foundations, a breach of the embankment crest or slopes from severe erosion or cracking, or a hydraulic failure due to internal erosion or piping. With no runoff from the surrounding slopes and with the limited precipitation in the area, overtopping failure should not be a concern as long as adequate freeboard is maintained during operations.

In the event of a failure of a gypsum stack, some portion of the retained gypsum slurry could be released and flow downhill from the release point. Simplot estimates that in addition to any flowable gypsum slurry, each gypsum stack expansion on Federal land would contain approximately 110 to 150 acre-feet

of free water. The volume, velocity, and runout distance would depend on the type and size of the breach, the volume and physical characteristics of the unconsolidated slurry, and the topography at and below the breach location. Simplot performs routine site safety inspections and monitoring of the gypsum stack targeted toward monitoring key operating elements and identifying critical conditions such as pond freeboard, exposed liner areas, process conveyances, slope stability, non-shrinkage cracks, seepage, and piping. On an annual basis, Simplot's engineer of record also performs a thorough evaluation of all facilities related to gypsum handling and storage and routinely reviews monitoring data.

A slurry and/or water spill would be addressed utilizing the current Don Plant Emergency Response Plan. Based on this document, site personnel are trained to respond to emergencies of small and large scale, both internally and in coordination with local emergency response officials. Additionally, an environmental reporting structure flowsheet is utilized to direct spill reporting. Simplot instituted additional safety measures since the leaks in 2013 and 2016 and the breach of 2015 to mitigate the risk of catastrophic failure and subsequent offsite release of process fluids.

In addition, emergency response planning will be a requirement of the finalized Bevill Amendment settlement (Simplot 2019I).

In the event of a failure of a cooling pond, some or all of the cooling water would be released and flow downhill from the release point. Each cooling pond would have a capacity of approximately 500 acre-feet. The volume, velocity, and runout distance would depend on the type and size of the breach, the volume of water in the pond, and the topography at and below the breach location. Simplot plans to develop an emergency action plan that covers potential releases from the proposed cooling ponds (Simplot 2019I).

3.5.4.2 Alternative A

Cumulative effects on geotechnical stability would be the same as described for the Proposed Action.

3.5.4.3 Alternative B

In general, the types of impacts on geotechnical stability would be the same as those of the Proposed Action and Alternative A. However, under Alternative B, the west gypsum stack would not be expanded onto the Federal lands; as a result, the east and south gypsum stack expansions would generally need to be larger to accommodate anticipated gypsum waste disposal needs at the Don Plant. Consequently, the potential for failure of the west gypsum stack expansion may be decreased while the potential failure of the east and south gypsum stacks and runout area of a failure may be increased compared to the Proposed Action and Alternative A. However, Simplot has indicated *"Any gypsum stack or cooling pond expansion areas that will be constructed in the future will be designed with a minimum static factor of safety of 1.5, which is the current engineering standard for earthen and gypsum containment dikes. The minimum dynamic factors of safety will be equal to or greater than 1.0 for the existing site conditions"* (Simplot 2019I), which would reduce the potential for gypsum stack failure under any alternative.

In addition, Alternative B would eliminate gypsum stack expansion into the west canyon area, which has steeply sloping terrain. Instead, the gypsum stacks would be expanded into the more gently sloping terrain to the south and east of the existing gypsum stack, providing for easier construction of the gypsum stacks and the liners. Initial engineering evaluation of the proposed expansion of the gypsum stack in this area also identified a more natural tie-in to the existing stack system compared to expanding the gypsum stacks into the west canyon.

3.5.4.4 No Action Alternative

With the Federal lands unavailable for construction of the cooling ponds and gypsum stack expansions, Simplot would continue incremental expansion and raising of the existing gypsum stack within the present Don Plant boundary. The existing gypsum stack is expected to reach design capacity by 2031, with the top of gypsum stack reaching an elevation of 5,005 feet above mean sea level. Simplot may construct additional compartments to distribute and manage gypsum slurry and process, increasing the capacity and extending the operational life of the gypsum stack. Simplot has not developed plans for the design and location of the gypsum stack compartments under the No Action Alternative, but any gypsum expansions would be subject to the same design criteria and regulations and contain the same chemical constituents as under the Proposed Action. Under the No Action Alternative, there is higher risk for a full-breach failure of the gypsum stacks than under the action alternatives because the proposed expansion areas for the action alternatives would allow for a similar volume of water and slurry to be distributed over more individual ponds, reducing the overall impounded depth of free-flowing materials and providing additional redundancy in the containment system.

No cooling ponds would be constructed on the Federal lands or within the present Don Plant boundary; therefore, there would be no additional geotechnical stability issues associated with cooling ponds under the No Action Alternative.

3.6 Hazardous or Solid Wastes

Internal and external scoping for the Blackrock Land Exchange EIS identified the following hazardous and solid waste issue for analysis:

- How would the proposed land exchange affect regulation and management of hazardous and solid wastes in the vicinity of the Federal and non-Federal lands?

3.6.1 Analysis Methods

3.6.1.1 Analysis Area

The analysis area for direct effects on hazardous and solid wastes is the Federal and non-Federal lands. This analysis area encompasses lands included in the Proposed Action that were evaluated in the Phase I environmental site assessments, as described in Appendix J (*Phase I Environmental Site Assessments*) for the presence or likely presence of any hazardous substances, petroleum products, solid waste, or physical hazards. In addition to the Federal and non-Federal lands, the analysis area of indirect and cumulative effects of hazardous and solid wastes also includes the Off-Plant Operable Unit of the EMF Superfund Site,⁹ which contains a portion of the Federal lands.

3.6.1.2 Assumptions

- Simplot will comply with all regulations applicable to the transportation, storage, generation, and disposal of hazardous and solid wastes for reasonably foreseeable actions on the Federal lands. Simplot would continue to implement legally enforceable controls required by the EPA's Record of

⁹ The Off-Plant Operable Unit of the EMF Superfund Site is not specifically mapped. In general, the Off-Plant Operable Unit is defined as the areal extent of all land, including Federal, private, and tribal land, surrounding the FMC and Simplot plants with contamination originating from the plants.

Decision for the EMF Superfund Site (EPA 1998, EPA 2010) and the IDEQ 2008 Voluntary Consent Order (IDEQ 2008a).

- The BLM will comply with all regulations applicable to the transportation, storage, generation, and disposal of hazardous and solid wastes for reasonably foreseeable actions on the non-Federal lands.

3.6.2 Affected Environment

As described in Appendix J (*Phase I Environmental Site Assessments*), the Phase I environmental site assessment for the Federal lands concluded that the Federal lands are part of the Off-Plant Operable Unit of the EMF Superfund Site. Environmental investigations performed for the site have generated data within and adjacent to the Federal land. Soil samples taken within Sections 17 and 19 of Township 6 South, Range 34 East of the Federal lands show that concentrations of beryllium, cadmium, vanadium, zinc, polonium-210, fluoride, chromium, lead, arsenic, and total phosphorous are above background levels but do not exceed reportable units as identified in 43 CFR 302. The contaminants are attributed to deposition via air from the FMC and Don Plant facilities. Although surface soils in the Federal lands have elevated levels of some metals and inorganics and some vegetation has elevated fluoride levels, the EMF Superfund Site risk assessment identified no unacceptable human health risks from elevated concentrations and only marginal ecological risks due to fluoride in vegetation. The EPA has not proposed any further remedial actions on the Federal lands (HDR, Inc. 2019a).

The Phase I environmental site assessment for the non-Federal lands did not reveal any current recognized environmental conditions associated with the area; however, one historic recognized environmental condition is present. The historic recognized environmental condition associated with the non-Federal land pertains to soil lead remediation, stemming from an unauthorized shooting range discovered in 1996. Simplot created a permanent soil cover over the lead-contaminated area in 1996 and moved the drainage course of the soil cover to prevent future flows from eroding the fill. The Phase I environmental site assessment identified areas where dispersed shooting was occurring; however, no high-density use was observed. Solid waste such target trash, pallets, wire, tires, camper shell, and scrap metal were also observed within the non-Federal lands. Two physical safety hazards were also identified and consist of a mine shaft and concrete water tank without a lid. The following recommendations were made regarding the physical hazards and solid waste:

- The BLM and Simplot should negotiate mitigation of the two physical hazards prior to BLM acceptance of title to the property.
- The solid waste (target trash, pallets, wire, tires, camper shell, and scrap metal) should be removed prior to acquisition.

Refer to Appendix J (*Phase I Environmental Site Assessments*) for additional information.

3.6.3 Direct and Indirect Effects

For all action alternatives, the proposed land exchange would make the new owners responsible for management of their respective lands and for any future liabilities on those lands related to any existing and future hazardous and solid wastes, unless the transfer agreement or other agreement indemnified one of the parties against such liabilities. In the absence of an indemnification agreement, the acquirer may have additional protection against Comprehensive Environmental Response, Compensation, and Liability Act liabilities under an innocent landowner defense, as described in the Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499, 1986).

The land exchange would bring into BLM administration the unauthorized solid waste disposal sites and two physical safety hazards identified in Appendix J (*Phase I Environmental Site Assessments*) on the non-Federal lands. However, the BLM and Simplot would negotiate removal of the solid waste and mitigation of the two physical hazards to the satisfaction of the BLM authorized officer prior to the BLM's acceptance of title to the property.

The BLM would manage the non-Federal lands in accordance with the Pocatello RMP (BLM 2012). Although the BLM would comply with all regulations applicable to the transportation, storage, generation, and disposal of hazardous and solid wastes, there may be incidental releases of hazardous or solid wastes associated with public use or resource use. For example, use of the non-Federal lands by recreationists may result in improperly managed solid waste or use of off-highway recreational vehicles or equipment used for permitted or authorized uses.

Under the No Action Alternative, ongoing activities at the Don Plant would continue to result in the transport, use, storage, and disposal of hazardous or solid wastes, which could affect certain resources such as air quality, soils, vegetation, and water resources. However, under the No Action Alternative, there would be no additional direct or indirect effects on hazardous or solid wastes because ownership, management, and liabilities associated with the Federal and non-Federal lands would remain unchanged.

3.6.4 Cumulative Effects

3.6.4.1 Proposed Action

Past, present, and ongoing activities at the Don Plant and the FMC plant have contributed to the cumulative degradation and contamination of surface soils, vegetation, and water resources within the Off-Plant Operable Unit of the EMF Superfund Site (EPA 2019b). Although surface soils in the Federal lands have elevated levels of some metals, radionuclides, and inorganics and some vegetation has elevated fluoride levels, the Superfund risk assessment identified no unacceptable human health risks and only marginal ecological risks due to fluoride in vegetation (EPA 2019b).

Construction of the cooling ponds, as facilitated by the Proposed Action, would decrease fluoride emissions from the Don Plant and deposition on vegetation and soils in the surrounding lands, as described in Section 3.2 (*Air Quality and Climate Change*).

Reasonably foreseeable actions on the Federal lands include the proposed expansions of Simplot's gypsum stacks and the construction of cooling ponds. The gypsum stacks would serve as waste disposal areas for phosphogypsum solids and slurry. The chemical characteristics of the slurry are shown in Table 3-8 and the chemical characteristics of the cooling pond water are shown in Table 3-9.

Potential cumulative effects from a major release from the gypsum stack expansions or the cooling ponds are discussed in Section 3.5 (*Geotechnical Stability*). Although both the gypsum stack expansions and the cooling ponds would be lined, leakage through the liners could release contaminants into the soil and groundwater. Potential cumulative effects on groundwater are discussed in Section 3.17 (*Water Resources*) and in Appendix H (*Water Resource Technical Report*).

Vehicles and equipment used for operating and maintaining the gypsum stack expansions and cooling ponds may have incidental leaks or spills of petroleum products such as gasoline, diesel fuel, hydraulic fluid, or oil, which could cause temporary, local soil or groundwater contamination.

Wind erosion may disperse phosphogypsum particles in the area of the gypsum stacks, especially during construction or maintenance of the embankments. Any such distribution of phosphogypsum particles is

anticipated to be similar to the effects of wind erosion on the existing gypsum stacks described in an investigation of soil radionuclides in the Off-Plant Operable Unit of the EMF Superfund Site prepared by Bechtel (2010). Findings of the soil radionuclides investigation indicate that elevated levels of radionuclides detected in surface soil samples in the Off-Plant Operable Unit were observed primarily north and east of the Don Plant and FMC facilities and were the result of windblown dust. Because Howard Mountain acts as a barrier to prevailing winds from the southwest and southeast, emissions to the south had been limited. The investigation also indicated that there was no evidence showing that subsurface soils in the Off-Plant Operable Unit had been affected by airborne releases associated with the Don Plant and FMC facilities.

3.6.4.2 Alternative A

Cumulative effects on hazardous or solid wastes would be the same as described for the Proposed Action.

3.6.4.3 Alternative B

Cumulative effects on hazardous or solid wastes would be similar to those described for the Proposed Action, except the new phosphogypsum waste disposal area would be configured to fit within the Alternative B Federal lands boundary. This could result in a slight variation in area that would be affected in the event of a gypsum stack release (see Section 3.5, *Geotechnical Stability*) and areas affected by dispersion of phosphogypsum particles.

3.6.4.4 No Action Alternative

Under the No Action Alternative, contamination and remediation activities associated with the EMF Superfund Site would continue. In addition, ongoing activities at the Don Plant would continue to result in the transport, use, storage, and disposal of hazardous or solid wastes, which could affect certain resources such as air quality, soils, vegetation, and water resources. However, because there would be no additional effects on hazardous or solid wastes associated with the land exchange, the No Action Alternative is not expected to contribute to additional cumulative effects.

3.7 Public Health and Safety

Internal and external scoping for the Blackrock Land Exchange EIS identified the following public health and safety issue for analysis:

- Would construction of the planned cooling ponds on the Federal lands cause incidences of fogging and icing on nearby roadways?
- Are there any physical hazardous in the lands proposed for exchange that could affect public safety?

In addition to potential public safety issues associated with possible fogging and icing on roadways, other public safety issues associated with the land exchange and reasonably foreseeable actions include potential failure of the gypsum stacks and cooling ponds, exposure to hazardous or solid wastes, and air and water quality degradation and associated health and safety effects. Refer to Section 3.5 (*Geotechnical Stability*), Section 3.6 (*Hazardous or Solid Wastes*), Section 3.2 (*Air Quality and Climate Change*), and Section 3.17 (*Water Resources*) for additional information on public health and safety concerns associated with these resources and conditions.

3.7.1 Analysis Methods

3.7.1.1 Analysis Area

The analysis area for direct, indirect, and cumulative effects on public safety from potential fog and icing effects is the planned location of the cooling ponds and nearby segments of Interstate 86 and U.S. Highway 30. This encompasses roadways that are closest to the reasonably foreseeable cooling ponds on the Federal land and the domain of the AERMOD dispersion model developed to analyze the effects of fog formation (Ramboll Environ 2016).

3.7.1.2 Assumptions

- The EPA regulatory dispersion model AERMOD reasonably simulates an upper bound on potential fogging and water deposition incidences.

3.7.2 Affected Environment

The location and frequency of natural fog formation in Idaho is variable, and statistics are available for only a few places, including National Weather Service Offices at airports in Boise, Lewiston, and Pocatello. Pocatello has an average of 10 days of heavy fog per year, the maximum monthly average being 4 days in January. In colder months, fog occasionally forms rime ice on power and communication lines, particularly if they persist for a few days. No statistics on the frequency or critical areas for such occurrences are available (Western Regional Climate Center n.d.).

The Phase I environmental site assessment for the non-Federal lands (Appendix J) identified two physical safety hazards. East of Blackrock Canyon Road on the non-Federal lands, there is a shallow abandoned mine shaft (entrance to an underground mine). The entrance is hidden by vegetation and there were no signs of entry (no paths from public accessing the entrance). The BLM visited the mine shaft and determined that there is no need for further site characterization due to the small extent of the feature. In the Caddy Canyon area, there is a concrete water storage tank that is missing the top lid and is accessible to the public.

3.7.3 Direct and Indirect Effects

The land exchange would not increase the potential for fog and ice formation on roadways and would therefore have no direct impacts on public health and safety from fog and ice formation. Making the Federal lands available for Simplot's planned development of the cooling ponds would be an indirect effect of the land exchange under all the action alternatives. Potential effects of these reasonably foreseeable actions on public safety are described in Section 3.7.4 (*Cumulative Effects*). The No Action Alternative would have no direct or indirect effects on fog and ice formation.

The land exchange would bring into BLM administration the two physical safety hazards identified in Appendix J (*Phase I Environmental Site Assessments*) on the non-Federal lands. However, the BLM and Simplot would negotiate mitigation of the two physical hazards to the satisfaction of the BLM authorized officer prior to the BLM's acceptance of title to the property.

3.7.4 Cumulative Effects

3.7.4.1 Proposed Action

Operation of the cooling ponds can create fog, particularly during the winter months when air can hold less water vapor due to the colder temperatures. This fog can create poor visibility conditions and, in the coldest temperatures, ice fog. If the ponds are placed too close to public roadways, they can create unsafe driving conditions.

Rambol Environmental conducted air quality modeling and prepared a report assessing water vapor concentrations and potential fogging and icing on U.S. Highway 30 and Interstate 86 due to the reasonably foreseeable cooling ponds on the Federal lands (Ramboll Environ 2016). EPA's air dispersion model (AERMOD) was applied to evaluate the frequency with which the proposed location of the cooling ponds could potentially affect visibility on part of U.S. Highway 30 and Interstate 86. The approach estimated water vapor emissions based on a method developed by Williams (1963) of Canada's National Research Council¹⁰ using a single year of meteorological data (2008) to perform this analysis. A review of the onsite wind rose data for years 2009–2012 in comparison to 2008 finds that wind fields had similar characteristics of two prevailing wind directions from the west-southwest and from the east-southeast, with comparable hours of low wind speeds. Radiative fog formation is also strongly dependent on precipitation (as a surrogate for soil moisture) and air temperature during winter months when the fog formation occurs. A review of 2008 winter months (December, January, and February) as recorded at Pocatello Airport showed that the average air temperature for each winter month ranged from 0.8 to 3.6 degrees Fahrenheit below each month's yearly average, which is potentially conducive to fog formation, while precipitation was above average in December but below average in January and February, which is less conducive to fog formation. However, the number of observed days with heavy fog (less than 0.25 mile visibility) during the winter months in 2008 was 18 days, which is nearly 5 days higher than the average over the 5 years from 2008 to 2012, which supports using 2008 as at least a typical if not conservative year for fog formation and valid for assessing the potential fog formation impacts from the cooling ponds.

The AERMOD analysis indicates fog from the cooling ponds would affect segments of U.S. Highway 30 for about 20 hours per year and segments of Interstate 86 for 10 hours per year. For U.S. Highway 30, approximately 5 of the 20 hours would occur when temperatures are below freezing, leading to the possibility of ice fog. The segments of U.S. Highway 30 and Interstate 86 evaluated are directly north and east of the Don Plant, generally bounded by the U.S. Highway 30 overpass to the west and Philbin Road to the east. Therefore, reasonably foreseeable actions associated with the Proposed Action could result in short-term and localized fogging and icing on U.S. Highway 30 and Interstate 86 throughout the operational life of the cooling ponds. The fog and icing could create short-term unsafe driving conditions in localized areas, particularly during the winter months.

Refer to Section 3.2 (*Air Quality and Climate Change*), Section 3.5 (*Geotechnical Stability*), Section 3.6 (*Hazardous or Solid Wastes*), and Section 3.17 (*Water Resources*) for additional information on public health and safety concerns associated with these resources and conditions.

¹⁰ A review of the method by Williams shows that the method used to determine the water vapor evaporation rate is based on data that are available to determine the net short-wave radiation, long-wave radiation, and heat associated with convection to determine the heat associated with evaporation. Penman's approach (1948) can then be applied to determine the water vapor evaporation rate. The Penman approach is regarded as one of the most accurate models to estimate evaporation rates if supporting data are available.

3.7.4.2 Alternative A

Cumulative effects on public health and safety due to fogging and icing would be the same as those of the Proposed Action.

3.7.4.3 Alternative B

Cumulative effects on public health and safety due to fogging and icing would be the same as those of the Proposed Action.

3.7.4.4 No Action Alternative

The No Action Alternative would have no new direct or indirect effects on public safety from fogging and icing of roadways because the cooling ponds would not be constructed. Therefore, the No Action Alternative would not contribute to cumulative effects, and fog and ice formation would occur naturally at a similar frequency to the existing baseline conditions described in Section 3.7.2 (*Affected Environment*).

3.8 Recreation

3.8.1 Analysis Methods

3.8.1.1 Issues Analyzed

Internal and external scoping for the Blackrock Land Exchange EIS identified the following recreation issue for analysis:

- How would the proposed land exchange affect recreational opportunities, access, and uses in the Pocatello SRMA?

3.8.1.2 Analysis Area

The analysis area for direct effects on recreation is the Federal and non-Federal lands, as defined in Chapter 2. This encompasses lands where public recreation access would be gained or lost from the proposed land exchange. The analysis area for indirect and cumulative effects on recreation is the full extent of the Pocatello SRMA (Appendix C, Map 11). This encompasses the recreation management area (i.e., Pocatello SRMA) containing the Federal and non-Federal lands included in the land exchange.

3.8.1.3 Assumptions

- Characterization of recreational visitation and use of the Federal and non-Federal lands is based on observations made by BLM staff.

3.8.2 Affected Environment

The Pocatello SRMA encompasses approximately 32,922 acres and contains five Recreation Management Zones (RMZs). The five RMZs within the Pocatello SRMA are identified below and shown in Appendix C, Map 11:

- West Bench RMZ (approximately 4,131 acres)
- Blackrock RMZ (approximately 15,017 acres)

- Papoose RMZ (approximately 3,375 acres)
- East Bench RMZ (approximately 1,330 acres)
- Dispersed RMZ (approximately 9,069 acres)

The Pocatello SRMA is managed to maintain and/or enhance targeted recreational opportunities, experiences, and benefits with a primary market-based strategy being “Community” for a market base of southeastern Idaho. The RMZs within the Pocatello SRMA are managed for a variety of recreational opportunities, including off-highway vehicle use, mountain biking, horseback riding, hunting, skiing, and camping. Refer to the Pocatello RMP (BLM 2012) for additional information on recreation management in the Pocatello SRMA and the RMZs.

The Federal lands proposed for exchange are within the West Bench RMZ (Appendix C, Map 11). Primary recreational activities within the West Bench RMZ include off-highway vehicle use, mountain biking, hiking/running, driving for pleasure, big game hunting, upland game hunting, cross-country skiing, and dispersed camping (BLM 2012). Access to public lands to the south and east of the Federal lands **proposed for exchange** is provided by Bannock County’s West Trail Creek Road and by an exclusive road easement secured by the BLM in 1984 under casefile number IDI-20922. West Trail Creek Road is closed seasonally from November 15 through May 15 annually.

The non-Federal lands included in the land exchange are directly adjacent to the Blackrock RMZ (Appendix C, Map 11). Primary activities within the Blackrock RMZ include off-highway vehicle use, mountain biking, horseback riding, driving for pleasure, hiking/running, big game hunting, upland game hunting, picnicking, cross-country skiing, and hang gliding (BLM 2012). Blackrock Canyon Road provides access to the southern portion of the non-Federal land. Public access across the non-Federal lands was acquired from the previous landowner by the BLM on February 11, 1989, under casefile number IDI-25601. The BLM does not have an easement for public access for the existing road that parallels Interstate 15 from Blackrock Canyon Road to the non-Federal lands in Caddy Canyon.

In addition to the recreation activities identified above, there has been historic target shooting on the non-Federal lands that resulted in previous lead contamination that has since been remediated. In 1995, the BLM implemented a target shooting restriction area or safety zone whereby shooting is prohibited within 150 yards on either side of Blackrock Canyon Road from the public land boundary north to Katsilometes Spring, which includes Township 7 South, Range 35 East, Sections 11, 12, and 14, Boise Meridian. The BLM and Simplot have posted “No Shooting” signs in the area.

3.8.3 Direct and Indirect Effects

3.8.3.1 Proposed Action

The Proposed Action would result in a net loss of 52 acres, approximately 0.16 percent, of BLM-administered land within the Pocatello SRMA. The Federal lands included in the land exchange are entirely contained within the West Bench RMZ (Appendix C, Map 11). Transferring the Federal lands into private land ownership would remove these lands from the Pocatello SRMA and remove the BLM’s ability to actively manage these areas for recreation access and targeted recreational opportunities and outcomes.

The 667 acres of non-Federal lands that the BLM would acquire would be managed for recreation opportunities and outcomes consistent with the management objectives of the Pocatello SRMA and Blackrock RMZ. The Chinese Peak/Blackrock Canyon Resource Activity Plan (BLM 1995) identified private lands that could enhance the management of the recreational use if they became available for Federal

acquisition. The non-Federal lands contain portions of the Chinese Peak-Blackrock Canyon Trail System and lands specifically identified for acquisition in the Activity Plan. BLM acquisition and administration of the non-Federal lands would secure additional legal public access within the Pocatello SRMA and Blackrock RMZ, which contain approximately 40 miles of designated off-highway vehicle trails and numerous developed recreation sites and facilities, and are a popular recreation destination for public land users. Transfer of the non-Federal lands into BLM administration would allow the establishment of legal access for designated routes T0351, T0352, and 0324, where the routes traverse the non-Federal lands (Appendix C, Map 12). Access for non-motorized and non-mechanized recreational activities would be available from Blackrock Canyon Road (Instrument No. 823202), Route T0351, Route T0352, and Route 0324 where the routes intersect the non-Federal lands (Appendix C, Map 12). The BLM's acquisition of the non-Federal lands would provide additional legal access to the BLM's Chinese Peak-Blackrock Trail System within Blackrock Canyon and Caddy Canyon.

3.8.3.2 Alternative A

Under Alternative A, the land exchange would result in an additional 160 acres of non-Federal land being transferred into BLM ownership, resulting in a total of 827 acres of land that the BLM would acquire in the land exchange. This represents a net gain of 108 acres of public lands resulting from the land exchange that would be managed within the Pocatello SRMA. Impacts on recreation under Alternative A would generally be the same as the impacts described for the Proposed Action, but increased based on the additional 160 acres of non-Federal lands included in voluntary mitigation Parcel A in the Caddy Canyon area that would be transferred to the BLM and managed for recreation opportunities and outcomes consistent with the management objectives of the Pocatello SRMA and Blackrock RMZ (Appendix C, Map 11). Acquisition of the non-Federal lands in voluntary mitigation Parcel A will provide legal access along designated routes that cross Parcel A (Appendix C, Map 12). Access will also be available for non-motorized and non-mechanized recreational activities within Parcel A. As a result, Alternative A is anticipated to increase recreational access and recreational opportunities and activities compared to the Proposed Action.

Alternative A would include the same Federal lands in the land exchange as the Proposed Action. As a result, impacts on recreation and access associated with transferring ownership of the Federal lands to Simplot would be the same as those of the Proposed Action.

Alternative A would also include Simplot's offer to donate the 950-acre voluntary donation Parcel B from private ownership to the BIA or the Shoshone-Bannock Tribes (Appendix C, Map 11). The extent to which voluntary donation Parcel B may be managed or used for recreation after conveyance is unknown.

3.8.3.3 Alternative B

Under Alternative B, the land exchange would include the same non-Federal lands being transferred from private ownership to the BLM as Alternative A. As a result, impacts on recreation and access associated with the non-Federal lands would be the same as those of Alternative A, including the increased recreational access and benefits associated with voluntary mitigation Parcel A being transferred from private ownership to BLM administration in the Caddy Canyon area and managed for recreation opportunities and outcomes consistent with the management objectives of the Pocatello SRMA and Blackrock RMZ (Appendix C, Map 11).

Alternative B would include a different configuration of Federal lands included in the exchange with approximately 8 fewer acres than the Proposed Action and Alternative A (Appendix C, Map 11). Due to the relatively similar acreage of Federal land being transferred out of BLM administration in the West

Bench RMZ, recreation impacts associated with the Federal lands are anticipated to be similar to those of the Proposed Action and Alternative A.

Similar to Alternative A, Alternative B would also include Simplot's offer to donate the 950-acre voluntary donation Parcel B from private ownership to the BIA or the Shoshone-Bannock Tribes. The extent to which voluntary donation Parcel B may be managed or used for recreation after conveyance is unknown.

3.8.3.4 No Action Alternative

Under the No Action Alternative, the proposed land exchange would not occur, and the associated impacts on recreation would not occur. The BLM would continue to manage the Federal lands within the Pocatello SRMA and in the West Bench RMZ. Recreational opportunities and use would continue on the Federal lands as they have in the past, including mountain biking, hiking/running, driving for pleasure, hunting, cross-country skiing, and other recreational activities. The non-Federal lands would continue to be retained in private ownership and the potential beneficial impacts from establishing additional legal access where designated routes of the Chinese Peak-Blackrock Trail system enter the non-Federal lands and voluntary mitigation Parcel A would not occur.

3.8.4 Cumulative Effects

3.8.4.1 Proposed Action

The BLM did not identify any past, present, or reasonably foreseeable actions that would combine with direct and indirect impacts from the land exchange to result in cumulative effects on recreation.

3.8.4.2 Alternative A

The BLM did not identify any past, present, or reasonably foreseeable actions that would combine with direct and indirect impacts from the land exchange to result in cumulative effects on recreation.

3.8.4.3 Alternative B

The BLM did not identify any past, present, or reasonably foreseeable actions that would combine with direct and indirect impacts from the land exchange to result in cumulative effects on recreation.

3.8.4.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on recreation and, therefore, would not contribute to cumulative effects.

3.9 Visual Resources

Internal and external scoping for the Blackrock Land Exchange EIS identified the following visual resource issue for analysis:

- How would the proposed land exchange and reasonably foreseeable actions affect BLM management of visual resources and scenic quality?

3.9.1 Analysis Methods

3.9.1.1 Analysis Area

The analysis area for direct effects on visual resources is the Federal and non-Federal lands. This encompasses areas where BLM management of visual resources would change due to the proposed land exchange. The analysis area for indirect and cumulative effects on visual resources is composed of the Federal lands, the non-Federal lands, and segments of Interstate 86, U.S. Highway 30, nearby recreation areas, and other locations from which the gypsum stack expansions or cooling ponds may be visible. This encompasses viewsheds of concern for the reasonably foreseeable actions.

3.9.1.2 Assumptions

- The non-Federal lands and voluntary mitigation Parcel A would be assigned a VRM class consistent with the class objectives of surrounding lands once transferred into BLM administration.

3.9.2 Affected Environment

The BLM's VRM system involves inventorying scenic values and assigning visual management classes in resource management plans. There are four VRM classes (I, II, III, and IV), which allow progressively greater amounts of visual change from human activities to the existing landscape. VRM designations for the Federal lands are shown in Appendix C, Map 13, and consist of 447 acres of VRM Class III and 236 acres of VRM Class IV for the Proposed Action and Alternative A Federal lands boundary, and 620 acres of VRM Class III and 51 acres of VRM Class IV for the Alternative B Federal lands boundary. Management objectives for these VRM classes are defined in BLM Manual H-8410-1 (BLM 1986) as follows:

- **Class III.** The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
- **Class IV.** The objective of this class is to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

The Federal lands consist of gently sloped hills and ridges dissected by several canyons that trend from south to north. Sagebrush and sagebrush-grassland are the dominant vegetation types, with patches of juniper on hillslopes, particularly on the west side of the canyons. The canyon rims are intermittently lined by cliffs and rock outcrops. The lines in the landscape are simple and predominantly horizontal in nature, with increasing complexity within the canyons at the western portion of the Proposed Action Federal lands and the eastern portion of the Alternative B Federal lands. The lines are formed by the shape of the hills, cliffs, and the subtle differences in concentrations of the vegetation. The soils are light brown to rust with gray rock outcrops. Vegetation hues range from green to brown, interspersed with patches of reddish-brown cheatgrass. Seasonally, grasses on canyon hillslopes are deeper shades of green. The southern portion of the Federal lands is predominantly natural and undisturbed, although damage to soils and vegetation is visible in some areas due to livestock grazing and the 2007 Howard Mountain Fire. Several gravel and two-track roads, railroad tracks, former reservoirs that are being reclaimed, and an aboveground communication line are present in the northern and eastern portions of the Federal lands. The visual quality of the Federal lands has been degraded by the presence of the

existing gypsum stack and Don Plant facilities directly adjacent to the northern boundary of the Federal lands. The industrial character of these facilities creates sharp line, color, and form contrasts with the adjacent Federal lands.

Portions of the Federal land are visible from observation points along Interstate 86 and U.S. Highway 30 north of the Don Plant, which are the most commonly traveled routes where the Federal lands are in view. These observation points are at elevations of approximately 4,450 feet in the Portneuf Valley, while the elevation of the Federal lands ranges from approximately 4,405 feet to 5,690 feet on the northern flanks of Howard Mountain. Northeast- to northwest-facing hillsides and ridges of the Federal lands are seen within the foreground-middleground distance zone (fewer than 3–5 miles away) when viewed from these observation points; however, due to the steep, sculpted terrain of the Federal lands and upward viewing angle from the observation points, other aspects are obscured from view and are considered to be within the seldom-seen distance zone.

The non-Federal lands are privately owned and therefore have not been inventoried for visual resources by the BLM and are not subject to BLM VRM objectives. The elevation of the non-Federal lands and voluntary mitigation Parcel A ranges from approximately 4,565 feet along Interstate 15 to 6,180 feet on ridges of the Bannock Mountains in voluntary mitigation Parcel A. Sagebrush and sagebrush-grassland are the dominant vegetation types on the rolling hills of the southern non-Federal land parcels, which exhibit some similar visual characteristics to the Federal lands. The lines in the landscape are horizontal in nature and are formed by the shape of the hills and the subtle differences in concentrations of the vegetation. The soils are light brown with occasional gray rock outcrops. Patches of reddish-brown cheatgrass intersperse with native and nonnative grassland species. The northern non-Federal land parcels, including voluntary mitigation Parcel A, contain a patchwork of bigtooth maple and maple-chokecherry, Douglas-fir, aspen stands, and grassland meadows on gently sloping terrain. Few human modifications are visible on the entirety of the non-Federal lands aside from several roads and trails. Portions of the non-Federal lands are visible from Interstate 15, but other areas are more commonly viewed by people using the lands for recreation.

3.9.3 Direct and Indirect Effects

3.9.3.1 Proposed Action

The 719 acres of Federal lands conveyed to Simplot, which include 447 acres of VRM Class III and 236 acres of VRM Class IV, would no longer be subject to BLM VRM objectives. Activities that create visual contrast and affect scenic quality of the landscape would occur at the discretion of the new landowner.

The 667 acres of non-Federal lands conveyed to the BLM would be assigned to VRM classes consistent with those of adjacent lands, which are generally Class III in the northern non-Federal land parcels and Class IV in the southern non-Federal land parcels. The BLM estimates that approximately 615 acres of the non-Federal lands would be managed as VRM Class III and 47 acres would be managed as VRM Class IV. In accordance with management actions in the Pocatello RMP (BLM 2012), the BLM would use the agency's visual resource contrast rating system during project-level planning for any future actions to determine whether proposed activities meet VRM objectives (Action VR-1.1.2) and identify mitigation measures necessary to reduce visual contrasts (Action VR-1.1.3).

3.9.3.2 Alternative A

Direct and indirect effects on visual resources would be the same as described for the Proposed Action, with the following differences:

- Voluntary mitigation Parcel A (160 acres) would be conveyed to the BLM and managed as VRM Class III. This would increase the acreage of lands managed under the BLM VRM system within the Pocatello Field Office by 160 acres.
- Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Activities that create visual contrast and affect scenic quality of the landscape would occur at the discretion of the new landowner.

3.9.3.3 Alternative B

The 711 acres of Federal lands conveyed to Simplot, which include 620 acres of VRM Class III and 51 acres of VRM Class IV, would no longer be subject to BLM VRM objectives. Activities that create visual contrast and affect scenic quality of the landscape would occur at the discretion of Simplot.

Direct and indirect effects on visual resources on the non-Federal lands would be the same as described for Alternative A.

3.9.3.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on visual resources. Visual resources on the Federal lands would continue to be managed as described in Section 3.9.2 (*Affected Environment*). The non-Federal lands would not be inventoried or managed under the BLM VRM system.

3.9.4 Cumulative Effects

3.9.4.1 Proposed Action

If the land exchange is approved, the reasonably foreseeable construction of cooling ponds and gypsum stacks on the Federal lands would introduce visual contrasts to the landscape, altering the existing visual character. These actions would convert an estimated 290 acres of the Federal lands and 189 acres of Simplot lands from a generally natural landscape to a modified industrial landscape. These changes would be in contrast with surrounding undeveloped lands to the west, south, and east of the Federal lands. However, the planned facilities would be similar in appearance to the existing gypsum stack and Don Plant facilities directly adjacent to the northern boundary of the Federal lands.

Some of the landscape modifications from the reasonably foreseeable actions would be visible from observation points on Interstate 86 and U.S. Highway 30; however, due to the upward viewing angle and higher elevation of the planned facilities, only parts of the gypsum stacks and cooling pond embankments would be visible. The surfaces of the gypsum stacks and cooling ponds, which are at a constant elevation and lower than the surrounding terrain, would not be seen from the observation points. Observers looking north to the Federal lands from BLM-administered lands south of the exchange area would see a greater degree of visual change, particularly from the ridges at the head of the west canyon.

No reasonably foreseeable actions that could affect visual resources were identified on the non-Federal lands.

3.9.4.2 Alternative A

Cumulative effects on visual resources on the Federal and non-Federal lands would be the same as those of the Proposed Action. Alternative A also includes conveyance of voluntary mitigation Parcel A (160 acres) and the offer to donate voluntary donation Parcel B (950 acres) out of private land

ownership; however, no reasonably foreseeable actions were identified that would contribute to cumulative effects in these areas.

3.9.4.3 Alternative B

Cumulative effects on visual resources from Alternative B would be similar to those of Alternative A, but reasonably foreseeable actions for Alternative B would convert an estimated 326 acres of the Federal lands and 174 acres of Simplot private lands from a generally natural landscape to a modified industrial landscape—36 more acres of Federal lands and 15 more acres of Simplot private lands than Alternative A. The different gypsum stack configuration would alter the visibility of the embankments as seen from the observation points on Interstate 86 and U.S. Highway 30; however, the types of visual contrasts created by the embankments would be the same as for Alternative A. Under Alternative B, these visual contrasts would occur primarily in the east canyon and south canyon areas, and gypsum stack embankments are likely to be more visible from observation points along portions of Interstate 86 and U.S. Highway 30 northeast of the Don Plant than under the Proposed Action and Alternative A.

3.9.4.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on visual resources and, therefore, would not contribute to cumulative effects. The visual modifications described for the Federal lands under the Proposed Action, and their associated visual effects, would not occur.

3.10 Lands and Realty

3.10.1 Analysis Methods

3.10.1.1 Issues Analyzed

Internal and external scoping for the Blackrock Land Exchange EIS identified the following lands and realty issues for analysis:

- How would the proposed land exchange affect existing authorized rights-of-way?
- How would the proposed land exchange affect public access to the Federal and non-Federal lands?

3.10.1.2 Analysis Area

The analysis area for direct, indirect, and cumulative effects on lands and realty is the Federal and non-Federal lands, as defined in Chapter 2, and associated access roads and easements. This encompasses lands encumbered by existing right-of-way authorizations and roads and easements that provide access to the Federal and non-Federal lands.

3.10.1.3 Assumptions

- Any existing trespass issues will be resolved outside of the NEPA process.

3.10.2 Affected Environment

Legal descriptions of the Federal and non-Federal land parcels proposed for exchange are provided in Tables 2-1 and 2-2. Section 2.1.2 (*Rights and Interests in the Lands Proposed for Exchange*) lists valid and existing rights-of-way, easements, leases, or other land use authorizations encumbering these lands,

which are not repeated here. There are no existing easements or other encumbrances on voluntary mitigation Parcel A.

The Pocatello RMP (BLM 2012) guides land use developments and activities in the Pocatello Field Office, including land exchanges. The Pocatello RMP (Action LR-5.2.1) establishes a four-zone concept for land tenure adjustments, where zones are delineated based on common issues or planned actions. The Federal and non-Federal lands proposed for exchange are located in Zone 3, which includes public lands that are interspersed with State and private lands or are adjacent to National Forest boundaries. The priority emphasis for Zone 3 is to consolidate ownership, which would maximize public values, provide public access, and improve efficiencies in public lands administration. Acquisition, primarily through exchange, would be done to add high resource value lands that improve the manageability of public lands; lower resource value and difficult-to-manage tracts would be disposed. Overall public land acreage would be maintained.

Public access to the Federal lands is limited because it is bordered by private lands to the north and east and the Fort Hall Reservation to the west. Legal public access to BLM-administered lands south and east of the Federal lands is provided by Bannock County's Trail Creek Road and an exclusive road easement secured by the BLM in 1984 under casefile number IDI-20922. The Federal lands are primarily accessed for dispersed recreational use within the West Bench RMZ of the Pocatello SRMA, which the BLM manages to provide motorized, mechanized, and non-motorized recreation opportunities. In addition, the Shoshone-Bannock Tribes exercise treaty rights on the Federal lands to hunt, gather, and practice cultural and customary activities.

Blackrock Canyon Road is maintained by Bannock County and provides access to the southern portion of the non-Federal land. Public access across the non-Federal lands via Blackrock Canyon Road (within Parcel R4013009700) was acquired from the previous landowner by the BLM on February 11, 1989, under casefile number IDI-25601. Blackrock Canyon Road continues north of the non-Federal lands, becoming BLM Road 0302, and connects to a network of other BLM roads, as shown in Appendix C, Map 12. Voluntary mitigation Parcel A is accessible from this BLM road network, but there is currently no easement or legal access to the parcel. The BLM currently does not hold an easement or legal access for the road that parallels Interstate 15 from Blackrock Canyon Road to the non-Federal land parcel in Caddy Canyon (Parcel R4013043100).

3.10.3 Direct and Indirect Effects

3.10.3.1 Proposed Action

The Proposed Action would include the exchange of both surface and subsurface rights for the Federal and non-Federal lands. Existing right-of-way authorizations encumbering both the Federal and non-Federal lands would be transferred to the new owner or reserved, as described below. Simplot and the BLM have agreed that no additional reservations, exceptions, covenants, restrictions, or encumbrances shall be placed on the Federal or non-Federal lands without notice to the corresponding party. The need to place such reservations, exceptions, covenants, restrictions, or encumbrances on a parcel may be grounds for the corresponding party to refuse acceptance of a parcel.

Simplot is requesting the BLM to issue a patent to Simplot for the 719 acres of Federal lands. The patent issued to Simplot would include a reservation to the United States of a right-of-way thereon for ditches and canals constructed under the authority of the United States pursuant to the Act of August 30, 1890 (43 U.S.C. 945). The patent would also be subject to the following existing rights-of-way:

- IDI-000148 held by Qwest Corporation for a telephone line authorized under the Act of February 15, 1901.
- IDI-001123 held by Union Pacific Railroad for water facilities authorized under the Act of February 15, 1901
- IDI-001449 held by Union Pacific Railroad for water pipeline under various statutes
- IDI-003990 held by Idaho Power Company for a power transmission line under the Act of October 21, 1976

The following land use authorizations on the Federal lands are held by Simplot and would merge with the property conveyed in the warranty deed when the title is accepted and the case files closed:

- IDI-022083 held by Simplot for air quality monitoring facility under the Act of October 21, 1976
- IDI-038926 held by Simplot for a geophysical survey under the Act of October 21, 1976

In exchange for the Federal lands, Simplot would convey 667 acres of non-Federal lands to the BLM. The BLM would manage the following inherited right-of-way on the non-Federal lands consistent with its original intended purpose and in accordance with goals, objectives, and management actions for lands and realty in the Pocatello RMP (BLM 2012):

- Instrument 402084 dated March 19, 1964 for easements, conditions, restrictions, and access rights contained in the deed to the State of Idaho in section 24 of T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho
- Instrument 408585 dated October 1, 1964 for easements, conditions, restrictions, and access rights contained in the deed to the State of Idaho in sections 23 and 24, T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho
- Instrument No. 653468 granted to Frank D. Rosa and Martha E. Rosa, a 30-foot-wide access road easement affecting section 24 of T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho

The following land use authorizations on the non-Federal lands are held by the Federal Government and would be merged with the property conveyed in the warranty deed when the title is accepted:

- Instrument No. 233847 dated October 23, 1944, to the United States of America affecting section 24 of T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho, for the purpose of repairing, renewing, or using a drift fence, or for other business pertaining to the use and maintenance thereof
- Instrument No. 233848 dated October 23, 1944, to the United States of America affecting section 13 & 24 of T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho, for a drift fence
- Instrument No. 823202 dated December 20, 1988, granted to the United States of America to locate, construct, use, control, maintain, improve, relocate, and repair a road in section 14 in T. 7 S., R. 35 E., Boise Meridian, Bannock County, Idaho

The proposed land exchange would meet goals, objectives, and management actions of the Pocatello RMP (BLM 2012) by consolidating Federal land ownership and acquiring high resource value lands in the Blackrock and Caddy Canyon areas (i.e., non-Federal lands), while disposing of Federal lands that generally have lower resource values due to their proximity to the existing Don Plant and are more difficult to manage due to the surrounding land uses and land ownership. The Proposed Action would result in the loss of public access to and use of the Federal lands, but would establish additional public access to the non-Federal lands that would be managed for recreation opportunities and outcomes consistent with the management objectives of the Pocatello SRMA and Blackrock RMZ. Transfer of the non-Federal lands into BLM administration would allow the establishment of legal access for designated

routes T0351, T0352, and 0324, where the routes traverse the non-Federal lands (Appendix C, Map 12). Access for non-motorized and non-mechanized use would be available from Blackrock Canyon Road (Instrument No. 823202), Route T0351, Route T0352, and Route 0324 where the routes intersect the non-Federal lands (Appendix C, Map 12). The BLM's acquisition of the non-Federal lands would provide additional legal access to the BLM's Chinese Peak-Blackrock Trail System within Blackrock Canyon and Caddy Canyon.

3.10.3.2 Alternative A

The direct and indirect effects of the proposed land exchange would be the same as described for the Proposed Action, except the inclusion of the 160-acre voluntary mitigation Parcel A (Appendix C, Map 2) would increase the total acreage of land conveyed to the BLM in the land exchange to 827 acres. Inclusion of voluntary mitigation Parcel A would increase the benefits of consolidating land ownership in the area, compared to the Proposed Action. The conveyance of voluntary mitigation Parcel A to the BLM would also establish additional legal public access to the Chinese Peak-Blackrock Trail System in Blackrock Canyon, specifically where Routes 0319 and T0354 traverse the parcel.

3.10.3.3 Alternative B

The direct and indirect effects of the proposed land exchange would be the same as those of Alternative A, except the Federal lands exchanged under Alternative B would have a different configuration (Appendix C, Map 2) and contain 8 fewer acres. No additional rights-of-way or easements are located inside the Federal lands proposed for exchange when compared to the Proposed Action. The BLM holds one additional water right (No. 29-07882) associated with a stockwater pond within the Alternative B Federal lands, which would be transferred to Simplot through the proposed land exchange.

3.10.3.4 No Action Alternative

Under the No Action Alternative, the proposed land exchange would not occur and the existing ownership, rights-of-way, and public access to Federal lands would remain as described in Section 3.10.2 (*Affected Environment*).

3.10.4 Cumulative Effects

3.10.4.1 Proposed Action

If the land exchange is approved, planned construction of the gypsum stack expansions and cooling ponds may require relocation of the following existing rights-of-way on the Federal lands:

- Right-of-way IDI-001123 (held by Union Pacific Railroad for reservoir and pipeline facilities) is within the conceptual footprint of the east gypsum stack expansion and the associated road/utility corridor.
- Right-of-way IDI-0-003990 (held by Idaho Power Company for a power transmission line) is within the conceptual footprint of the cooling ponds, the east gypsum stack expansion, and the associated road/utility corridors.
- Right-of-way IDI-022083 (held by J.R. Simplot Corporation for an air quality monitoring facility) is within the conceptual footprint of the proposed east gypsum stack expansion.

These potential rights-of-way conflicts could be resolved by Simplot and the right-of-way holder.

Rights-of-way IDI-00148 (held by Qwest Corporation for a telephone line), IDI-001449 (held by Union Pacific Railroad for a railroad track and water pipeline), and IDI-038926 (Simplot geophysical survey) are not anticipated to be affected by the reasonably foreseeable actions because they are outside of the conceptual footprints for the planned facilities.

No reasonably foreseeable actions were identified on the non-Federal lands that would contribute to cumulative effects on rights-of-way, access, or easements.

3.10.4.2 Alternative A

Cumulative effects on rights-of-way, access, and easements on the Federal and non-Federal lands would be the same as described for the Proposed Action.

3.10.4.3 Alternative B

The gypsum stack expansions would have a different configuration than under the Proposed Action; however, the same rights-of-way are anticipated to require relocation as those identified for the Proposed Action. As a result, cumulative effects on rights-of-way, access, and easements on the Federal and non-Federal lands would be the same as described for the Proposed Action.

3.10.4.4 No Action Alternative

Under the No Action alternative, the land exchange would not occur and the reasonably foreseeable actions would not be implemented. Therefore, there would be no cumulative effects on rights-of-way, access, and easements under the No Action alternative.

3.11 Geology and Paleontology

3.11.1 Analysis Methods

3.11.1.1 Issues Analyzed

Internal and external scoping for the Blackrock Land Exchange EIS identified the following geology and paleontology issue for analysis:

- How would the proposed land exchange affect paleontological resources on the Federal lands?

3.11.1.2 Analysis Area

The analysis area for direct, indirect, and cumulative effects on paleontological resources is the Federal and non-Federal lands as defined in Chapter 2. This encompasses parcels where the proposed land exchange could affect regulatory authority over and future management of paleontological resources. This area also encompasses the areal extent where reasonably foreseeable actions could result in impacts on paleontological resources due to surface disturbance and excavation.

3.11.2 Affected Environment

The Federal and non-Federal lands are underlain by six mapped sedimentary bedrock units, one volcanic bedrock unit, two igneous basaltic units, and five surficial Quaternary sedimentary units (Appendix C, Maps 9 and 10). The sedimentary bedrock units are Precambrian in age and are metamorphosed to some degree. The bedrock unit of most paleontological interest in on the lands proposed for exchange is the Starlight Formation, which consists of interbedded flows, tuffs, and minor water-laid deposits of

volcanic origin. The surficial Quaternary sedimentary units include gravel, younger and older alluvium, loess, and boulder bar deposits. The two igneous bedrock units are Quaternary-age basalts; because igneous bedrock units have very low potential to contain paleontological resources, they are not described in detail in this section (Paleo Solutions 2019).

Appendix F (*Paleontological Technical Report*) presents the results of a paleontological resource study conducted for the Blackrock Land Exchange. This study collected and evaluated readily available existing paleontological data from geologic maps, a preliminary version of the regional BLM potential fossil yield classification (PFYC) of the geologic units, published and unpublished literature, and the results of museum records searches. The study assessed the paleontological sensitivity of the geologic units in the Federal and non-Federal lands through research on known fossil potential and paleontological significance and the number and significance of previously recorded and newly discovered fossil localities, in the same geologic units, and in the general region.

The BLM uses the PFYC system to provide an estimate of the potential that significant paleontological resources will be found in a mapped geological unit, which can be used to assess possible resource impacts and mitigation needs for Federal actions that involve surface disturbance, land use planning, or land tenure adjustment (BLM 2016). The PFYC system uses a numbered rating system to report paleontological potential, with PFYC 1 representing very low potential for paleontological resources and PFYC 5 representing very high potential for paleontological resources.

The results of the paleontological study indicate that the non-Federal lands have a PFYC of 2, which represents a low potential for paleontological resources (Appendix C, Map 14), and that the Federal lands have PFYCs of 2 (low potential) and 4 (high potential) (Appendix C, Map 15). The approximately 449 acres of Federal land area with a PFYC of 4 are associated with the Starlight Formation, which has been known to yield moderately diverse and scientifically important assemblages of fossil mammals.

In July 2019, paleontological surveys were conducted on the Federal land areas with high paleontological resource potential, including areas of the mapped Starlight Formation that may have possible exposures of sedimentary deposits interbedded with volcanic facies. The survey confirmed the presence of a potentially fossiliferous volcanoclastic sedimentary deposit within the Starlight Formation exposed near the base of the surveyed valley; however, no fossil material was observed in these outcrops during the survey.

Refer to Appendix F (*Paleontological Technical Report*) for additional information on geologic formations and units in the land exchange area and results of the paleontological resource study.

3.11.3 Direct and Indirect Effects

The Proposed Action would result in the transfer of 667 acres of non-Federal land into BLM administration. As a result, the BLM would manage the 667 acres of lands under the Paleontological Resources Protection Act and in accordance with the goals, objectives, and management actions in the Pocatello RMP (BLM 2012). The non-Federal lands have a low potential for paleontological resources (PFYC 2); as a result, there are no anticipated direct impacts on paleontological resources or the BLM's management of paleontological resources associated with conveyance of the non-Federal lands.

The Proposed Action would result in the transfer of 719 acres of Federal land into private ownership. As a result, the 719 acres of Federal land would no longer be subject to the Paleontological Resources Protection Act, which only applies to the management and protection of paleontological resources on Federal land. The Federal lands do include approximately 449 acres with a PFYC of 4; however, paleontological surveys of areas with high paleontological potential did not identify any fossil material.

As a result, minimal impacts on paleontological resources and their management are anticipated from transferring the Federal lands out of BLM administration. Making the Federal lands available for Simplot's reasonably foreseeable actions would be an indirect effect of the proposed land exchange under all the action alternatives. Potential effects of these reasonably foreseeable future actions on paleontological resources are described in Section 3.11.4 (*Cumulative Effects*).

3.11.3.1 Alternative A

Impacts on paleontological resources would be the same as those of the Proposed Action.

3.11.3.2 Alternative B

Impacts on paleontological resources would be similar to those of the Proposed Action, except that the Federal land acreage transferred out of BLM administration would include approximately 28 fewer acres of PFYC 4 areas.

3.11.3.3 No Action Alternative

The No Action Alternative would have no direct or indirect effects on paleontological resources. The BLM would continue to manage Federal lands under the Paleontological Resources Protection Act and consistent with the goals, objectives, and management actions in the Pocatello RMP.

3.11.4 Cumulative Effects

3.11.4.1 Proposed Action

Past and present actions on the Federal and non-Federal lands, including construction and maintenance of rights-of-way and easements, are anticipated to have had minimal impacts on paleontological resources due to the relatively low PFYC ratings and the limited amount of rights-of-way on the lands. Due to the low PFYC ratings on the non-Federal lands and the lack of identified reasonably foreseeable actions on the non-Federal lands, there are no anticipated cumulative impacts on paleontological resources on the non-Federal lands.

Construction of the reasonably foreseeable actions of the expanded gypsum stacks and the cooling ponds on Federal lands could contribute to cumulative impacts if disturbance occurs in areas with a PFYC of 4. Construction of the expanded gypsum stacks and the cooling ponds would result in an estimated disturbance of 140 acres in PFYC 4 on the Federal lands. Excavation associated with construction of the expanded gypsum stacks and cooling ponds could result in inadvertent destruction of or damage to paleontological resources in the PFYC 4 areas. However, surveys conducted in PFYC 4 areas on the Federal lands did not identify any fossil materials. As a result, potential impacts on paleontological resources from the reasonably foreseeable actions are expected to be low.

3.11.4.2 Alternative A

Cumulative impacts would be the same as those of the Proposed Action.

3.11.4.3 Alternative B

Construction of the reasonably foreseeable actions under Alternative B would result in an estimated disturbance of 180 acres in PFYC 4 on the Federal lands, an increase of 40 acres compared to the Proposed Action and Alternative A. However, based on surveys conducted in PFYC 4 areas on the Federal lands, the additional area of disturbance in PFYC 4 under Alternative B would occur in areas that

are volcanic with no interbedded sedimentary deposits; therefore, the potential for fossil occurrence in these areas is low. As a result, potential impacts on paleontological resources from the reasonably foreseeable actions under Alternative B are expected to be low.

3.11.4.4 No Action Alternative

The No Action Alternative would have no cumulative effects on paleontological resources.

3.12 Livestock Grazing

3.12.1 Analysis Methods

3.12.1.1 Issues Analyzed

Internal and external scoping for the Blackrock Land Exchange EIS identified the following livestock grazing issue for analysis:

- How would the proposed land exchange affect the acreage and amount of forage available for livestock grazing?

3.12.1.2 Analysis Area

The analysis area for direct, indirect, and cumulative effects on livestock grazing is the full extent of the grazing allotments that overlap all or portions of the Federal and non-Federal lands, as defined in Chapter 2. These are the Trail Creek-2, Blackrock, and Rapid Creek grazing allotments.

3.12.1.3 Assumptions

- Livestock grazing on the non-Federal lands would continue in a similar manner and degree as previous grazing seasons whether or not the land exchange occurs.

3.12.2 Affected Environment

The Federal lands are within the Trail Creek-2 grazing allotment, as shown in Appendix C, Map 16 and in Table 3-10. The allotment has one permittee, Michaud Creek Ranches Inc., who is allocated 550 active animal unit months (AUMs) for 275 cattle (BLM 2019h). An AUM represents the amount of forage necessary for the sustenance of one cow or its equivalent for a period of 1 month. The season of use is May 1 to June 30. The allotment is approximately 5,601 acres in size, including 4,215 acres of BLM-administered lands. Approximately 50.2 acres of voluntary donation Parcel B (included in Alternatives A and B) are within the Trail Creek-2 allotment; however, these lands are privately owned and not subject to BLM grazing management.

The non-Federal lands are primarily within the Blackrock grazing allotment, as shown in Appendix C, Map 16 and in Table 3-10. The allotment is approximately 16,411 acres in size, including 11,141 acres of BLM-administered lands. Voluntary mitigation Parcel A (included in Alternatives A and B) is entirely within the Blackrock grazing allotment. Allotments often contain a mix of Federal, State, and private lands. The BLM only manages grazing that occurs on BLM-administered Federal lands. The allotment has two permittees, the Estate of James Katsilometes and Todd H. Mickelsen, who in total are allocated 2,058 sheep with 729 AUMs. The season of use is May 8 to July 5.

The eastern portion of the non-Federal lands overlaps approximately 11 acres of the Rapid Creek allotment. The allotment is approximately 3,571 acres in size, including 3,051 acres of BLM-administered lands. This allotment has four permittees, who in total are authorized 358 cattle with 454 AUMs from April 15 to May 31.

There are no existing or scheduled rangeland improvement projects within the Federal lands or non-Federal lands.

Table 3-10. Livestock Grazing Allotments on Lands Proposed For Exchange

Allotment Name and Number	Total Allotment Acres	Acres within Federal Lands (Proposed Action and Alternative A)	Acres within Federal Lands (Alternative B)	Acres within Non-Federal Lands (All Action Alternatives)	Acres within Parcel A	Acres within Parcel B
Trail Creek-2 (ID06098)	5,655	686.8	684.8	0.0	0.0	50.2
Blackrock (ID06097)	16,411	0.0	0.0	594.3	158.8	0.0
Rapid Creek (ID16082)	3,571	0.0	0.0	10.5	0.0	0.0

Source: BLM 2019h.

Note: Total allotment acres as report in the BLM Rangeland Administration System (BLM 2019h). All other acreages calculated from BLM grazing allotment geographic information system data.

3.12.3 Direct and Indirect Effects

3.12.3.1 Proposed Action

Federal lands available for livestock grazing would be reduced by 719 acres after being conveyed to Simplot. The Federal lands support an estimated 70 AUMs (BLM 2019c), or approximately 10.2 acres per AUM. Loss of these AUMs would decrease the total AUMs available within the Trail Creek-2 allotment and decrease BLM revenues received from grazing fees. The latter effect is discussed in Section 3.18 (*Socioeconomics and Environmental Justice*).

When an exchange involves the cancellation of a grazing permit or lease, 43 CFR 4110.4-2(b) requires the BLM to notify the grazing permittee 2 years prior to the exchange, unless the permittee waives the notification requirement. The sole grazing permittee within the Trail Creek-2 allotment, Michaud Creek Ranches Inc., waived the 2-year notification requirement in July 2019 (BLM 2019c).

The non-Federal lands have historically been used for livestock grazing in conjunction with adjacent BLM-administered lands. No grazing utilization records were obtained for the non-Federal lands, but, based on utilization trends for adjacent Federal lands, the BLM estimates that they support approximately 44 AUMs, or about 15 acres per AUM. As mentioned in Section 3.12.2 (*Affected Environment*), the BLM only manages livestock grazing on BLM-administered lands. The 44 private AUMs are not part of the total allotment AUMs. The Blackrock and Rapid Creek allotments, including the acquired non-Federal lands, would be managed under the current grazing authorization and no AUMs would be added to the existing grazing permits. After the exchange, the non-Federal lands would be available for livestock grazing subject to the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997) or goals, objectives, and management actions for livestock grazing specified in the Pocatello RMP (BLM 2012). The BLM does not anticipate any change to the season of use, AUMs, or other grazing management for the Blackrock or Rapid Creek allotments.

3.12.3.2 Alternative A

Direct and indirect effects on livestock grazing would be the same as described for the Proposed Action, with the following differences:

- Voluntary mitigation Parcel A (160 acres and an estimated 10.6 AUMs) would be conveyed to the BLM and available for livestock grazing within the Blackrock allotment. This would increase the acreage and forage available for livestock grazing on BLM-administered lands within the Blackrock allotment.
- Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Livestock grazing on these lands would be at the discretion of the new landowner.

3.12.3.3 Alternative B

Direct and indirect effects on livestock grazing would be the same as described for Alternative A, except the reconfigured Alternative B Federal lands would support approximately 69 AUMs, 1 fewer than the Proposed Action and Alternative A.

3.12.3.4 No Action Alternative

The BLM would retain ownership and continue to manage livestock grazing on the Federal lands within the Trail Creek-2 allotment. Grazing use of the non-Federal lands would likely continue at similar utilization levels at the discretion of Simplot.

3.12.4 Cumulative Effects

3.12.4.1 Proposed Action

None of the reasonably foreseeable actions would contribute to cumulative effects on livestock grazing because the Federal lands would no longer be available for livestock grazing after the land exchange. No reasonably foreseeable actions were identified on the non-Federal lands that have the potential to contribute to cumulative effects on livestock grazing.

3.12.4.2 Alternative A

For the same reasons as explained above for the Proposed Action, Alternative A would not contribute to cumulative effects on livestock grazing.

3.12.4.3 Alternative B

For the same reasons as explained above for the Proposed Action, Alternative B would not contribute to cumulative effects on livestock grazing.

3.12.4.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on livestock grazing and, therefore, would not contribute to cumulative effects.

3.13 Soils

Internal and external scoping for the Blackrock Land Exchange EIS identified the following soil issues for analysis:

- How would the proposed land exchange affect future management of soils and reasonably foreseeable actions affecting soils on the Federal and non-Federal lands?
- How would the proposed land exchange affect regulatory authority, future management, and liability associated with contaminated soils in the vicinity of the Federal and non-Federal lands?

3.13.1 Analysis Methods

3.13.1.1 Analysis Area

The analysis area for direct effects on soils is the Federal and non-Federal lands. This encompasses parcels where the proposed land exchange could affect regulatory authority over and future management of soils. The analysis area of indirect and cumulative effects on soils is the Off-Plant Operable Unit of the EMF Superfund Site, which includes the Federal and non-Federal lands. This encompasses the areal extent of known surface soil contamination from past and present phosphate processing operations, and areas where reasonably foreseeable actions could result in additional contamination.

3.13.1.2 Assumptions

- Simplot would continue to implement legally enforceable controls required by the EPA's Record of Decision for the EMF Superfund Site (EPA 2010) and the 2008 IDEQ Voluntary Consent Order (IDEQ 2008a). Reasonably foreseeable actions on the Federal lands would be subject to these same controls.
- Simplot would implement a stormwater pollution prevention plan (SWPPP) and control measures for reasonably foreseeable actions on the Federal lands in accordance with EPA and IDEQ requirements. These measures would minimize soil erosion and sediment loss.
- Water erosion potential was classified based on the slope and the Kw value for the dominant condition of the soil map unit, as assigned by the Natural Resources Conservation Service (2019). Kw is a numeric factor representing the susceptibility of a soil to sheet and rill erosion by water, adjusted for the effect of rock fragments. Slope and Kw values were classified for this analysis as follows:
 - High Erosion Potential = maximum slope greater than or equal to 10 percent and Kw greater than or equal to 0.37; or maximum slope greater than or equal to 30 percent and Kw greater than or equal to 0.20, but less than 0.37
 - Moderate Erosion Potential = maximum slope greater than or equal to 10 percent, but less than 30 percent and Kw between 0.20 and 0.37; or maximum slope greater than or equal to 30 percent and Kw less than 0.20
 - Low Erosion Potential = maximum slope less than 10 percent or Kw less than 0.20
- Wind erosion potential was classified based on the wind erodibility group of the dominant condition of the soil map unit, as assigned by the Natural Resources Conservation Service (2019). Wind erodibility groups were classified for this analysis as follows:
 - High Erosion Potential = Group 1 or 2

- Moderate Erosion Potential = Group 3, 4, or 4L
- Low Erosion Potential = Group 5, 6, 7, or 8
- Runoff potential was classified based on the hydrologic soil group of the dominant condition of the soil map unit, as assigned by the Natural Resources Conservation Service (2019). Hydrologic soil groups are based on the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. Hydrologic soil groups were classified for this analysis as follows:
 - Very High Runoff Potential = Group D
 - High Runoff Potential = Group C
 - Moderate Runoff Potential = Group B
 - Low Runoff Potential = Group A

3.13.2 Affected Environment

Table 3-11 lists the acreages and key characteristics of soil map units on the Federal lands, as identified by the Natural Resources Conservation Service (2019) Soil Survey Geographic Database. The location of each soil map unit is shown in Appendix C, Map 18. In general, soils within the Federal lands formed in loess or loess-influenced colluvium. Textures are generally fine loams and loams. Although there are areas of deep fine loams, most of the soils are shallow, rocky, and well drained. Rock is a major component of the Swanner-Rock outcrop complex, which is present under the cliffs and steep, rocky slopes on the eastern side of the west canyon, the south and east canyons, and the southwestern corner of the Proposed Action and Alternative A Federal lands. Soils within this complex typically have low erosion potential and high runoff potential. The Watercanyon-Swanner-Rock outcrop complex is the dominant soil type within the eastern portion of the Alternative B Federal lands, interlaced with Ririe silt loam in drainages. These soils typically exhibit high water erosion potential and moderate to high runoff potential. Soils within the Federal lands generally have low to moderate wind erosion potential. Approximately 0.3 acre of the McDole-McDole variant complex mapped in the far northeastern corner of the Federal lands along the Portneuf River are considered prime farmlands if irrigated.

Soils within the Federal lands are largely undisturbed and support natural vegetation communities; however, several historic disturbances are present, particularly in the northernmost portion of the Federal lands, as well as areas with degraded soil and vegetation conditions due to the 2007 Howard Mountain Fire and livestock grazing. Soil contamination within the Federal lands is described in Section 3.6 (*Hazardous or Solid Wastes*); no other remedial actions for soils on the Federal lands have been proposed because there are no identified unacceptable risks to human health and only marginal ecological risks.

Table 3-11. Soil Map Units on the Federal Lands

Map Unit Name	Acres within Proposed Action and Alternative A Boundary	Acres within Alternative B Boundary	Water Erosion Potential	Wind Erosion Potential	Runoff Potential
Cedarhill-Ririe-Watercanyon complex, 30 to 60 percent slopes	223.1	0.0	Low	Low	Moderate
McDole-McDole variant complex, 0 to 2 percent slopes	0.3	0.2	Low	Moderate	Moderate
Pocatello silt loam, 12 to 20 percent slopes	30.4	22.3	High	Moderate	Moderate

Map Unit Name	Acres within Proposed Action and Alternative A Boundary	Acres within Alternative B Boundary	Water Erosion Potential	Wind Erosion Potential	Runoff Potential
Ririe silt loam, 12 to 20 percent slopes	0.0	2.0	High	Low	High
Ririe silt loam, 4 to 12 percent slopes	60.9	148.4	High	Low	High
Swanner-Hondoho complex, 12 to 20 percent slopes	136.0	136.7	Low	Low	Very High
Swanner-Rock outcrop complex, 50 to 80 percent slopes	180.7	61.3	Low	Low	Very High
Watercanyon-Swanner-Rock outcrop complex, 20 to 50 percent slopes	88.6	339.8	High	Moderate	Moderate

Source: Natural Resources Conservation Service 2019.

Note: Refer to Section 3.13.1.2 for assumptions used to define the soil characteristics reported in this table.

Appendix C, Map 17 shows the locations of soil map units on the non-Federal lands and voluntary mitigation Parcel A. Soils in the southern portion of the non-Federal lands are mapped almost entirely as Valmar, with low-precipitation Watercanyon-Hondoho complex on the hill slopes and ridges. A small area of valley floor along the southern edge is mapped as Hondoho-Arbone complex. These soils generally formed in loess or loess-influenced colluvium and are deep, fine-textured soils. Soils in the northern portion of the non-Federal lands are more variable, with Valmar-Camelback-Hades complex mapped on ridges and upper hill slopes, and Moonlight-Camelback association and Pavohroo-Moonlight complex mapped in the valleys and lower hill slopes. In general, these soils formed in loess-influenced colluvium derived from quartzite or metasedimentary or sedimentary rocks. Soils in the southern portion of the non-Federal lands generally have low water and wind erosion potential and moderate to high runoff potential. They are predominantly naturally vegetated with few disturbances aside from several existing roads and trails. Simplot remediated previous lead contamination from an unauthorized shooting range in 1996 and cleaned up a former tire dump in 2002 (HDR, Inc. 2019b). No other areas of past or present soil contamination are known.

Appendix C, Map 19 shows the locations of soil map units in the voluntary donation Parcel B area, which consist predominantly of silt loams on gently sloping terrain along Michaud Creek. These soils formed primarily in loess or loess-influenced colluvium. Silt loams have generally high water erosion potential on slopes greater than 10 degrees and low to moderate wind erosion potential. Runoff potential is generally moderate, with high runoff potential on Portneuf and Ririe silt loams. Soils in voluntary donation Parcel B are generally sparsely vegetated and used for livestock grazing or plowed and irrigated for agriculture. Approximately 222 acres of Portneuf silt loams mapped within voluntary donation Parcel B are considered prime farmland if irrigated and reclaimed of excess salts and sodium. Additionally, approximately 13.8 acres of Pocatello silt loam mapped within voluntary donation Parcel B are considered farmland of statewide importance, if irrigated.

3.13.3 Direct and Indirect Effects

3.13.3.1 Proposed Action

The transfer of 719 acres of land out of Federal ownership would result in the Federal lands no longer being subject to the BLM's soil management actions described in the Pocatello RMP (BLM 2012). The

proposed land exchange would also transfer lands with contaminated soils related to the Off-Plant Operable Unit of the EMF Superfund Site out of Federal ownership and to a potentially responsible party (i.e., Simplot), which would release the BLM from associated management responsibilities and liabilities. The soil management goals and objectives set forth in the Pocatello RMP would no longer apply and the implementation plan to achieve these goals and objectives would no longer be required. Specifically, resource protections to minimize soil loss from surface disturbance and promote reclamation success listed under Goal SW-1 would no longer apply after the land exchange but the Federal lands may be subject to State permitting reclamation standards.

The transfer of 667 acres of non-Federal land into Federal ownership would result in the non-Federal lands becoming subject to the goals, objectives, and management actions for soils identified and described in the Pocatello RMP (BLM 2012). BLM management actions that would be applied to the non-Federal lands would generally require the incorporation of specific protections for soils for any BLM-authorized actions that could affect soils; however, no reasonably foreseeable actions on the non-Federal lands with the potential to affect soils have been identified at this time.

Making the Federal lands available for Simplot's reasonably foreseeable actions would be an indirect effect of the proposed land exchange under all the action alternatives. Potential effects of these reasonably foreseeable future actions on soils are described in Section 3.13.4 (*Cumulative Effects*).

3.13.3.2 Alternative A

Impacts on soils would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for soils identified and described in the Pocatello RMP. Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Soils within these lands would be subject to management objectives and actions by the new landowner.

3.13.3.3 Alternative B

Impacts on soils would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for soils identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the soil management goals, objectives, and management actions in the Pocatello RMP.

3.13.3.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on soils; contaminant concentrations in soils surrounding the Don Plant would continue to be monitored in accordance with existing environmental compliance requirements and protocols.

3.13.4 Cumulative Effects

3.13.4.1 Proposed Action

Table 3-12 reports the estimated acres of disturbance within mapped soil units from the reasonably foreseeable actions of the cooling ponds, gypsum stack expansions, and associated facilities based on conceptual facility footprints provided by Simplot. Soils within the footprints of these facilities would be

excavated for cut and fill materials used to form gypsum stack and cooling pond embankments, ponds, and surrounding access corridors. Soils within the steep-sided canyons used for the gypsum stack expansions would be blasted and graded prior to installation of the gypsum stack liner. Soil disturbance from the reasonably foreseeable actions would affect an estimated 290 acres of the Federal lands and 189 acres of Simplot private lands.

Simplot's application of best management practices specified in permits obtained under requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater program would minimize the potential for soil loss and erosion during construction and operational activities; however, some level of erosion and conveyance of sediment to downgradient waters is anticipated due to the large acreages of disturbed, unvegetated soils that would be exposed during phased construction activities and the steep terrain of the Federal lands. These effects would be greatest on soils identified as having high erosion potential in Table 3-11, which include approximately 197 acres within the Pocatello silt loam, Ririe silt loam, and Watercanyon-Swanner-Rock outcrop complex units. Additionally, without vegetation cover, runoff rates would increase, particularly for soils identified as having high runoff potential in Table 3-11, which include approximately 272 acres within the Ririe silt loam, Swanner-Hondoho complex, and Swanner-Rock outcrop complex units.

Table 3-12. Estimated Acres of Soil Disturbance from Reasonably Foreseeable Actions, Proposed Action and Alternative A

Map Unit Name	Federal Lands	Simplot Land
Cedarhill-Ririe-Watercanyon complex, 30 to 60 percent slopes	65.0	2.3
Pocatello silt loam, 12 to 20 percent slopes	25.6	18.0
Ririe silt loam, 4 to 12 percent slopes	35.3	24.0
Swanner-Hondoho complex, 12 to 20 percent slopes	46.5	39.8
Swanner-Rock outcrop complex, 50 to 80 percent slopes	80.4	46.3
Watercanyon-Swanner-Rock outcrop complex, 20 to 50 percent slopes	37.5	57.0
Total	290.3	187.5

Source: Natural Resources Conservation Service 2019.

A small percentage of excavated topsoil may be segregated and stockpiled for use in reclamation of areas not needed for long-term operations. As explained in Section 2.1.3.1.8 (*Closure and Reclamation*), during final closure, the gypsum stacks and cooling ponds would be covered with structural material, a low-permeability liner, and a protective soil layer. The soil surface would be graded to minimize ponding and infiltration and vegetated, which would minimize the potential for soil contamination and erosion during the post-closure period. However, the specific design and materials for the cover have not been determined at this time.

As explained in Section 3.2 (*Air Quality and Climate Change*), the construction of cooling ponds to replace existing cooling towers at the Don Plant is anticipated to reduce and shift the location of fluoride deposition on soils and vegetation within the Off-Plant Operable Unit of the EMF Superfund Site. The fluoride in forage concentrations are anticipated to decrease in all forage sampling areas with no exceedances of the State standards.

No reasonably foreseeable actions with the potential to affect soils on the non-Federal lands have been identified at this time.

3.13.4.2 Alternative A

Cumulative effects on soils would be the same as described for the Proposed Action. No reasonably foreseeable actions with the potential to affect soils on voluntary mitigation Parcel A or voluntary donation Parcel B have been identified at this time.

3.13.4.3 Alternative B

Cumulative effects from Alternative B would be similar to those of the Proposed Action, except the location of the reasonably foreseeable actions would differ with respect to the terrain and soil types present. Table 3-13 reports the estimated acres of disturbance within mapped soil units from the planned construction of cooling ponds, gypsum stack expansions, and associated facilities based on conceptual facility footprints provided by Simplot. Soil disturbance from the reasonably foreseeable actions would affect an estimated 326 acres of the Federal lands and 171 acres of Simplot private lands. Alternative B reasonably foreseeable actions would disturb approximately 36 more acres of Federal lands and 17 fewer acres of Simplot private lands than under the Proposed Action. This would include 270 acres of soils with high erosion potential (73 more acres than the Proposed Action) and 308 acres with high runoff potential (36 more acres than the Proposed Action). Due to the greater area of soil disturbance and higher potential for erosion and runoff, the configuration of the gypsum stack expansions under Alternative B is anticipated to have a greater adverse effect on soils than for the Proposed Action. Due to the preliminary nature of the facility designs for Alternative B, soil cut and fill volumes have not been estimated.

Table 3-13. Estimated Acres of Soil Disturbance from Reasonably Foreseeable Actions, Alternative B

Map Unit Name	Federal Lands	Simplot Land
Pocatello silt loam, 12 to 20 percent slopes	0.0	6.5
Ririe silt loam, 4 to 12 percent slopes	80.4	24.0
Swanner-Hondoho complex, 12 to 20 percent slopes	81.1	41.5
Swanner-Rock outcrop complex, 50 to 80 percent slopes	37.9	42.6
Watercanyon-Swanner-Rock outcrop complex, 20 to 50 percent slopes	126.2	56.2
Total	325.6	170.8

Source: Natural Resources Conservation Service 2019.

3.13.4.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on soils and, therefore, would not contribute to cumulative effects. Fluoride deposition on soils in areas surrounding the Don Plant would continue similar to current rates for as long as the existing cooling towers remain in operation. Continued exceedances of the State fluoride in forage standards are anticipated to continue while the Don Plant cooling towers remain in operation.

3.14 Vegetation

Internal and external scoping for the Blackrock Land Exchange EIS identified the following vegetation issues for analysis:

- How would the proposed land exchange affect future management of vegetation and reasonably foreseeable actions affecting vegetation on the Federal and non-Federal lands?

- How would the proposed land exchange affect regulatory authority, future management, and liability associated with contaminated vegetation in the vicinity of the Federal and non-Federal lands?

3.14.1 Analysis Methods

3.14.1.1 Analysis Area

The analysis area for direct effects on vegetation is the Federal and non-Federal lands. This encompasses parcels where the land exchange could affect regulatory authority over and future management of vegetation. In addition to the Federal and non-Federal lands, the analysis area of indirect and cumulative effects on vegetation includes the Off-Plant Operable Unit of the EMF Superfund Site, which contains a portion of the Federal lands. This encompasses the areal extent of known fluoride-contaminated vegetation from past and present phosphate processing operations, and areas where reasonably foreseeable actions could result in vegetation removal and alter fluoride deposition rates.

3.14.1.2 Assumptions

- Simplot would implement required controls to ensure that all fluoride emission-generating activities at the Don Plant, including reasonably foreseeable actions on the Federal lands, comply with the IDEQ Voluntary Consent Order (IDEQ 2008a).

3.14.2 Affected Environment

Vegetation descriptions are based on site-specific vegetation surveys conducted in June, July, and August of 2019 and 2014 LANDFIRE Existing Vegetation Type geographic information system (GIS) data (ICF 2019; LANDFIRE 2014). The surveys identified vegetation types and plant species, as well as searched for occurrences of BLM special status plants and species listed as noxious weeds by the State of Idaho. The special status plant surveys followed BLM protocols for collecting data on the distribution, condition, trend, and utilization of these species.

Federal lands under the Proposed Action and Alternative A are dominated by three vegetation classes, including exotic herbaceous (43 percent), grassland (22 percent), and shrubland (17 percent); the remaining 18 percent consists of agriculture, conifer, developed, hardwood, and riparian vegetation classes (Appendix C, Map 21). Alternative B Federal lands are dominated by exotic herbaceous (37 percent), shrubland (29 percent), and conifer (18 percent); the remaining 16 percent consists of agriculture, developed, grassland, hardwood, and riparian (Appendix C, Map 21).

Major vegetation types identified during field surveys on the Federal lands include Utah juniper, riparian forest, sagebrush and sagebrush-grassland, mixed shrub, grassland, and cliffs/rocks. Sagebrush and sagebrush-grassland are the dominant vegetation types and occur in a mosaic over most of the Federal lands. Big sagebrush is the dominant shrub, but several other shrubs are common, including threetip sagebrush, antelope bitterbrush, rubber rabbitbrush, and green rabbitbrush. In less-disturbed stands, the understory is diverse and dominated by native bunch grasses and forbs, including bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass. Typical native forbs in these stands include Hooker's balsamroot, browse milkvetch, rush milkvetch, spotted fritillary, mariposa lily (sage lily), biscuitroot, fleabanes, parsnipflower buckwheat, and tapertip onion. Low sagebrush is found on sites with shallow soils and around rock outcrops. With the exception of grassland, the remaining vegetation types on the Federal lands are confined to a few areas or small patches scattered throughout the sagebrush and sagebrush-grassland. Grasslands are intermixed with sagebrush in a complex mosaic over most of the

survey area, as previously described. Patches of Great Basin wildrye are found on valley floors and in steeper, narrow valleys. The species typically forms relatively dense stands with few other species present between the grass clumps; typical species includes tarragon, stickseed, and bluebells.

Areas with higher utilization rates and/or affected by the 2007 Howard Mountain Fire have lower densities of sagebrush and greater densities of rubber rabbitbrush and green rabbitbrush. Broom snakeweed becomes the dominant shrub on the disturbed and heavily grazed areas, and cheatgrass and bulbous bluegrass replace the native bunchgrasses.

The Federal lands are not within any special status species priority areas and the U.S. Fish and Wildlife Service (FWS) has not identified any threatened or endangered plants as occurring or potentially occurring on the Federal lands (BLM 2010; FWS 2019); therefore, potential impacts on federally listed plants are not further analyzed in this EIS. No BLM special status plants were identified during botanical surveys conducted on the Federal lands (ICF 2019).

On Federal lands identified for exchange under the Proposed Action, nine species of noxious weeds were identified, primarily within disturbed sites. Species included include Nodding plumeless thistle, hardheads, spotted knapweed, rush skeletonweed, Canada thistle, poison hemlock, field bindweed, dyer's woad, and reed grass. The noxious weed species occurred primarily in heavily disturbed areas and did not appear to be invasive in the natural plant communities of the survey area.

As indicated in Section 3.2 (*Air Quality and Climate Change*), forage within the Off-Plant Operable Unit of the EMF Superfund Site has been contaminated with fluoride from the Don Plant emissions. Simplot is under a Consent Order to reduce fluoride emissions.

The non-Federal lands are dominated by two vegetation classes, including exotic herbaceous (65 percent) and shrubland (19 percent); the remaining 16 percent consists of agriculture, grassland, conifer, developed, hardwood, riparian, and sparsely vegetated vegetation classes. Voluntary mitigation Parcel A is dominated by hardwood (54 percent), shrubland (27 percent), and conifer (12 percent); the remaining 7 percent consists of agriculture, conifer-hardwood, developed, riparian, and sparsely vegetated vegetation classes (Appendix C, Map 20). Voluntary donation Parcel B is dominated by shrubland (32 percent) and agriculture (30 percent); the remaining 38 percent consists of conifer, developed, exotic herbaceous, grassland, hardwood, and riparian vegetation classes (Appendix C, Map 22).

Major vegetation types identified on the non-Federal lands and voluntary mitigation Parcel A during field surveys include juniper, bigtooth maple-chokecherry, Douglas-fir, aspen, sagebrush/sagebrush-grassland, netleaf hackberry, mixed shrubs, riparian woodland and scrub, nonnative grassland, Great Basin wildrye, native grassland, tall meadow, and cliff/rocks. Sagebrush and sagebrush-grassland are the dominant vegetation types on the non-Federal lands. Undisturbed or less-disturbed stands of big sagebrush are typically found on north-facing slopes. In these areas, the shrub layer is quite dense and threetip sagebrush, antelope bitterbrush, rubber rabbitbrush, and green rabbitbrush are common. Native bunch grasses and forbs are well developed in the openings between shrubs. Common bunchgrasses include bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass; typical native forbs in these stands include lupines, parsnipflower buckwheat, penstemons, pussytoes, western stone seed, spotted stickseed, common yarrow, and mariposa lily. Much of the sagebrush area has been degraded by cycles of wildfire and invasion of nonnative species, especially cheatgrass and dyer's woad. In these degraded areas, the remains of sagebrush shrubs that succumbed to wildfire are evident.

The FWS has not identified any threatened or endangered plants as occurring or potentially occurring on the non-Federal lands, voluntary mitigation Parcel A, and voluntary donation Parcel B (BLM 2010; FWS 2019); therefore, potential impacts on federally listed plants are not further analyzed in this EIS (FWS

2019). No BLM special status plants were identified during botanical surveys conducted on the non-Federal lands or voluntary mitigation Parcel A (ICF 2019).

Eight species of noxious weeds were identified during field surveys on the non-Federal lands and voluntary mitigation Parcel A. Species include goat grass, whitetop, nodding plumeless thistle, rush skeletonweed, Canada thistle, field bindweed, leafy spurge, and dyer's woad. Dyer's woad is noticeably abundant on the non-Federal lands along Blackrock Canyon Road and on the south-facing lower hillslopes and valley floors. Whitetop is also abundant along the stream that flows along Blackrock Canyon Road, forming dense patches along both sides of the stream.

3.14.3 Direct and Indirect Effects

3.14.3.1 Proposed Action

The Proposed Action would have no direct effects on vegetation; however, the transfer of ownership in the Federal and non-Federal lands could result in indirect effects due to the change in vegetation management associated with transferring lands between a private entity and a Federal land management agency. In addition, the Proposed Action would make the Federal lands available for reasonably foreseeable actions that could affect vegetation. Refer to Section 3.14.4 (*Cumulative Effects*) for additional information on these cumulative effects associated with reasonably foreseeable actions on the Federal land.

The transfer of the 719 acres of Federal land out of Federal ownership would result in the Federal lands no longer being subject to the BLM's vegetation management actions described in the Pocatello RMP (BLM 2012). The vegetation goals and objectives set forth in the Pocatello RMP would no longer apply and the implementation plan to achieve these goals and objectives would no longer be required. Specifically, Pocatello RMP Goal VE-2, "*Prevent the establishment of invasive species/noxious weed species,*" and Goal VE-4, "*Manage vegetation types for provide for their continued presence as part of an ecologically healthy system,*" would no longer apply after the land transfer. Additional information on the Pocatello RMP vegetation goals, objectives, and management actions can be found in the Pocatello RMP (BLM 2012).

The Proposed Action would also transfer 667 acres of non-Federal land into Federal ownership, which would result in the non-Federal lands being subject to the vegetation goals, objectives, and management actions identified and described in the Pocatello RMP. The Pocatello RMP management actions on non-Federal lands would generally result in protection and restoration of native vegetation (including special status plants) and management of invasive species/noxious weeds, which are actions not currently occurring on non-Federal lands.

The proposed land exchange would also transfer fluoride-contaminated vegetation out of Federal ownership and to a potentially responsible party (i.e., Simplot), which would release the BLM from associated management responsibilities and liabilities.

3.14.3.2 Alternative A

Impacts on vegetation would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership (voluntary mitigation Parcel A) that would be subject to the goals, objectives, and management actions for vegetation identified and described in the Pocatello RMP.

Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Vegetation within these lands would be subject to management objectives and actions by the new landowner.

3.14.3.3 Alternative B

Impacts on vegetation would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership (voluntary mitigation Parcel A) that would be subject to the goals, objectives, and management actions for vegetation identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the vegetation management goals, objectives, and management actions in the Pocatello RMP.

3.14.3.4 No Action Alternative

The No Action Alternative would have no direct effects on vegetation. Fluoride emissions from operation of the Don Plant would continue at approximately the same levels shown in Table 3-2 for the foreseeable future and would continue to contaminate vegetation. Contaminant concentrations in forage surrounding the Don Plant would continue to be monitored in accordance with existing environmental compliance requirements and protocols. See Section 3.2, *Air Quality and Climate Change*, for additional information.

3.14.4 Cumulative Effects

3.14.4.1 Proposed Action

Construction of the reasonably foreseeable actions of the cooling ponds and expanded gypsum stacks on the Federal lands would result in 290 acres of surface disturbance and clearing of vegetation. Based on LANDFIRE vegetation GIS data, the majority of this surface disturbance would affect the exotic herbaceous vegetation class (35 percent), followed by shrubland (28 percent), grassland (15 percent), and conifer (10 percent). The remaining vegetation classes affected include agriculture, hardwood, riparian, and developed.

Indirect impacts from the potential establishment and spread of noxious and invasive species could occur in and around the cooling ponds and gypsum stack disturbance area. While many of the invasive and noxious plants identified during field surveys are outside of the disturbance area for the expanded gypsum stacks and the cooling ponds, there are several patches of dyer's woad that are within or near the disturbance area. Establishment or spread of noxious and invasive species could result in decreased resilience of native plant communities. This could include native plant communities being less resilient to disturbance (e.g., drought) with the presence of weedy species, which increases susceptibility for transition to a less desirable vegetative state.

The planned construction of new cooling ponds would enable eventual closure of the existing cooling towers to meet fluoride reduction requirements mandated by the 2016 Consent Order, which would eliminate fluoride and particulate matter emissions from the towers. Simplot would implement required controls to ensure that all fluoride emission-generating activities at the Don Plant comply with the IDEQ Voluntary Consent Order. As a result, the decrease in the fluoride emissions from the cooling towers closure is anticipated to decrease fluoride deposition and concentrations in vegetation with no exceedances of the State standards. See Section 3.2 (*Air Quality and Climate Change*) for more information.

The BLM's development of a 5-year noxious weed treatment plan would result in long-term beneficial effects on vegetation on non-Federal lands. Although there may be minor trampling of vegetation while treating the noxious weeds (primarily from using utility terrain vehicles to access treatment areas), those effects would be temporary and minor. Additionally, a potential cooperative agreement between the BLM and Bannock County to treat noxious weeds would also result in long-term beneficial effects.

3.14.4.2 Alternative A

Cumulative effects on vegetation on the Federal lands would be the same as those of the Proposed Action. Alternative A also includes conveyance of voluntary mitigation Parcel A (160 acres) and the offer to donate voluntary donation Parcel B (950 acres) out of private land ownership; however, no reasonably foreseeable actions were identified that would contribute to cumulative effects in these areas.

3.14.4.3 Alternative B

For the reconfigured Federal land area under Alternative B, construction of the reasonably foreseeable actions of the cooling ponds and expanded gypsum stacks on the Federal lands would result in surface disturbance and the removal of 326 acres of vegetation, an increase of 36 acres compared to the Proposed Action. Based on LANDFIRE vegetation GIS data, the majority of the surface disturbance would affect the shrubland (34 percent), exotic herbaceous (25 percent), conifer (21 percent), and grassland (13 percent) vegetation classes. The remaining vegetation classes affected include developed, riparian, hardwood, and agriculture.

As under the Proposed Action, indirect impacts from the potential establishment and spread of noxious and invasive species could occur in and around the cooling ponds and gypsum stack expansion disturbance area. Patches of Canada thistle, dyer's woad, and rush skeletonweed are within or near the disturbance area. Establishment or spread of noxious and invasive species could result in decreased resilience of native plant communities and transition to a less desirable vegetative state.

The effects on vegetation on non-Federal lands, voluntary mitigation Parcel A, and voluntary donation Parcel B under Alternative B would be the same as those of Alternative A.

3.14.4.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on vegetation and, therefore, would not contribute to cumulative effects.

3.15 Wetlands and Riparian Zones

Internal and external scoping for the Blackrock Land Exchange EIS identified the following wetland and riparian issues for analysis:

- How would the proposed land exchange affect regulation and management of wetlands and riparian zones on the Federal and non-Federal lands?

3.15.1 Analysis Methods

3.15.1.1 Analysis Area

The analysis area for direct, indirect, and cumulative effects on wetlands and riparian zones is the Federal and non-Federal lands. This encompasses wetlands and riparian zones that may be affected by

changes in land ownership and management and reasonably foreseeable future actions on the Federal and non-Federal lands.

3.15.1.2 Assumptions

- Wetland and riparian zone descriptions are based the National Wetlands Inventory, site-specific surveys, and 2014 LANDFIRE Existing Vegetation Type GIS data (FWS 2018; ICF 2019; LANDFIRE 2014).

3.15.2 Affected Environment

No wetlands, springs, or seeps are identified on the Federal lands. The Portneuf River is a perennial river that flows through the northeastern corner of the Federal lands (approximately 67 feet) and supports a band of dense riparian vegetation dominated by green ash (Appendix C, Map 21). The understory is sparse and consists of scattered golden currant, rose, stinging nettle, and nonnative climbing nightshade. The greater riparian area that extends beyond the Federal lands boundary (approximately 4,200 linear feet) is completely isolated by U.S. Highway 30 to the north, railroad tracks to the south, Batiste Road to the east, and disturbed and maintained road and transmission line rights-of-way to the west.

The LANDFIRE vegetation GIS data identify approximately 18 acres of riparian vegetation on the Proposed Action Federal lands along two intermittent streams, and 9 acres of riparian vegetation on Alternative B Federal lands along an intermittent stream (Appendix C, Map 21). The Proposed Action Federal lands contain approximately 0.8 mile of intermittent streams, while the Alternative B Federal lands contain approximately 0.4 mile of intermittent streams.

Field surveys identified one spring on the non-Federal lands. This hillslope spring had flowing water that supported a small wetland about 40 feet long and 5 to 15 feet wide with sedges and rushes. One seep was also identified on voluntary mitigation Parcel A with no associated wetland observed; the seep flows to the northeast toward an intermittent stream that drains to West Fork Rapid Creek (ICF 2019). No wetlands were identified on voluntary donation Parcel B (FWS 2018). The non-Federal lands contain approximately 0.8 mile of intermittent streams, while voluntary mitigation Parcel A contains approximately 0.3 mile of intermittent streams. Voluntary donation Parcel B contains approximately 1.1 miles of perennial streams and 1.4 miles of intermittent streams.

Field surveys on the non-Federal lands identified a few small patches of riparian scrub, and a few riparian trees along a perennial stream that flows alongside Blackrock Canyon Road. The scrub area includes a dense thicket of sandbar willow, with an understory of creeping wildrye, and whitetop, an invasive plant. Individual riparian trees include box elder, narrowleaf cottonwood, chokecherry, and hawthorn. The herbaceous layer is well developed and includes stinging nettle, whitetop, geum, and creeping bentgrass.

The LANDFIRE vegetation GIS data identify approximately 8 acres of riparian vegetation on the non-Federal lands, 5 acres on voluntary mitigation Parcel A, and 37 acres on voluntary donation Parcel B (Appendix C, Maps 20 and 22). The riparian areas on the non-Federal lands are associated with unnamed intermittent tributaries to the Portneuf River. Riparian areas on voluntary mitigation Parcel A are associated with an unnamed intermittent tributary to West Fork Rapid Creek, and on voluntary donation Parcel B are associated with Michaud Creek and intermittent tributaries to Michaud Creek.

3.15.3 Direct and Indirect Effects

3.15.3.1 Proposed Action

The Proposed Action would have no direct effects on wetlands and riparian zones; however, the transfer of ownership in the Federal and non-Federal lands could result in indirect effects due to the change in wetland and riparian zone management associated with transferring lands between a private entity and a Federal land management agency. The Proposed Action would make the Federal lands available for reasonably foreseeable actions that could affect a riparian zone. Refer to Section 3.15.4 (*Cumulative Effects*) for additional information on these cumulative effects associated with reasonably foreseeable actions on the Federal lands.

The transfer of 719 acres out of Federal ownership would result in the Federal lands no longer being subject to the BLM's wetland and riparian zone goals, objectives, and management actions described in the Pocatello RMP (BLM 2012). The wetland and riparian zone goals and objectives set forth in the Pocatello RMP would no longer apply and the implementation plan to achieve these goals and objectives would no longer be required. Specifically, Pocatello RMP Goal VE-1, "*Provide for the proper functioning condition (PFC) of riparian areas,*" and Goal VE-2, "*Prevent the establishment of invasive species/noxious weed species,*" would no longer apply after the land transfer. These effects would apply to approximately 18 acres of riparian vegetation and 0.8 mile of intermittent streams on the Federal lands. Additional information on the Pocatello RMP wetland and riparian zone goals, objectives, and management actions can be found in the Pocatello RMP (BLM 2012).

The Proposed Action would also transfer 667 acres of non-Federal land into Federal ownership, which would result in the non-Federal lands being subject to the wetland and riparian zone goals, objectives, and management actions identified and described in the Pocatello RMP (BLM 2012). In general, Federal management of riparian and wetland areas on the non-Federal lands would decrease the potential for destruction and degradation of these resources, which include one spring, approximately 8 acres of riparian vegetation, and 0.8 mile of intermittent streams.

3.15.3.2 Alternative A

Impacts on wetlands and riparian zones would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership (voluntary mitigation Parcel A), including one seep, approximately 5 acres of riparian vegetation, and 0.3 mile of intermittent streams. These features would be subject to the goals, objectives, and management actions for wetlands and riparian zones identified and described in the Pocatello RMP.

Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Wetlands and riparian zones within these lands, which include approximately 37 acres of riparian vegetation, 1.1 miles of perennial streams, 1.4 miles of intermittent streams, would be subject to management objectives and actions by the new landowner.

3.15.3.3 Alternative B

Impacts on wetlands and riparian zones would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership (voluntary mitigation Parcel A), including the identified seeps/wetland and riparian zones, that would be subject to the goals, objectives, and management actions for wetlands and riparian zones identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres

of Federal lands conveyed to Simplot that would no longer be subject to the wetland and riparian management goals, objectives, and management actions of the Pocatello RMP. The Alternative B Federal lands contain approximately 0.4 fewer mile of intermittent streams than the Proposed Action and Alternative A Federal lands.

3.15.3.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on wetlands and riparian zones.

3.15.4 Cumulative Effects

3.15.4.1 Proposed Action

If the land exchange is approved, construction of the reasonably foreseeable actions of the cooling ponds on the Federal lands would have no direct impacts on wetlands or the riparian zone associated with the Portneuf River because no wetlands have been identified on the Federal lands and the Portneuf River riparian zone is approximately 630 feet away from the nearest area of proposed disturbance. Based on LANDFIRE vegetation GIS data, approximately 17 acres of riparian vegetation class would be permanently removed for development of the cooling ponds.

Indirect impacts on the Portneuf River riparian zone from development of the cooling pond could include overland runoff and introduction of contaminants such as sediment from surface-disturbing activities. However, railroad tracks and a paved road run adjacent to the riparian zone and separate the disturbance area from the riparian zone. In addition, overland runoff impacts would be avoided or minimized through Simplot's SWPPP as required by the NPDES construction permit (Clean Water Action Section 402) that is administered by the IDEQ. The SWPPP and NPDES permit conditions would contain site-specific measures to avoid and minimize erosion and sedimentation and petrochemical spills. Under the NPDES permit, Simplot must document the erosion, sediment, and pollution controls it intends to use, inspect the controls periodically, and maintain the controls throughout the life of the facilities. Therefore, with the protections provided by these requirements, impacts on the riparian zone along the Portneuf River would be avoided or minimized.

No direct or indirect effects are anticipated on wetlands and riparian zones on the non-Federal lands as a result of the land exchange and no reasonably foreseeable actions were identified that could contribute to cumulative effects. Following transfer of the 667 acres of non-Federal lands into BLM administration, the BLM would manage wetlands and riparian zones in accordance with the Pocatello RMP. Therefore, the Proposed Action would not contribute to cumulative effects on wetlands and riparian zones on the non-Federal lands.

3.15.4.2 Alternative A

Cumulative effects on wetlands and riparian zones on the Federal lands under Alternative A would be the same as described for the Proposed Action.

The effects on wetlands and riparian zones on the non-Federal lands under Alternative A would be the same as described for the Proposed Action, but with the addition of voluntary mitigation Parcel A, which would also be subject to the same Pocatello RMP wetland and riparian zone management actions as the non-Federal lands once transferred to the BLM. Therefore, Alternative A would not contribute to cumulative effects on wetlands and riparian zones on the non-Federal lands.

3.15.4.3 Alternative B

Cumulative effects on wetlands and riparian zones on the Federal lands under Alternative B would be the same as described for the Proposed Action, but with less permanent impact on riparian vegetation (2 acres instead of 17 acres), based on LANDFIRE vegetation GIS data. The effects on wetlands and riparian zones on non-Federal lands under Alternative B would be the same as described for Alternative A.

3.15.4.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on wetlands and riparian zones and, therefore, would not contribute to cumulative effects.

3.16 Fish and Wildlife

Internal and external scoping for the Blackrock Land Exchange EIS identified the following fish and wildlife issues for analysis:

- How would the proposed land exchange and reasonably foreseeable actions affect BLM sensitive species?
- How would the proposed land exchange and reasonably foreseeable actions affect mule deer winter range?
- How would the proposed land exchange and reasonably foreseeable actions affect general fisheries resources, including native non-game fish, native game fish, and nonnative game fish and their habitats on Federal lands and areas downstream?

3.16.1 Analysis Methods

3.16.1.1 Analysis Area

The analysis area for direct effects on fish and wildlife is the Federal and non-Federal lands. This encompasses wildlife habitats subject to changes in management due to the proposed land exchange. The analysis area for indirect and cumulative effects on fish and wildlife is the combined area of the Portneuf Watershed (Hydrologic Unit Code 8-17040208), the portion of the American Falls Watershed (Hydrologic Unit Code 8-17040206) containing voluntary donation Parcel B, and Idaho Department of Fish and Game (IDFG) Game Management Units 70 and 71 (Appendix C, Map 23). This encompasses watersheds and game management units within which indirect and cumulative effects on fisheries and mule deer could occur.

3.16.1.2 Assumptions

- The existing gypsum stack is not equipped with any mechanisms intended to exclude or deter wildlife, nor has any formal monitoring been conducted to document instances of drowning, entrapment, or ingestion of toxic constituents by migratory birds and other wildlife species. Simplot staff have not observed wildlife mortalities in association with operation of the existing gypsum stack. It is hypothesized that wildlife avoid the gypsum stacks due to human activity, the absence of desirable habitat characteristics, and the proximity of extensive aquatic and wetland habitat associated with the nearby American Falls Reservoir. For these reasons, the planned gypsum stack and cooling ponds are assumed to pose minimal risk of drowning, entrapment, and toxicity for migratory birds and other wildlife species.

- Fish and wildlife descriptions are based on site-specific botanical surveys (ICF 2019), the Proposed and Approved Pocatello RMPs (BLM 2010, 2012), BLM wildlife surveys of Federal and non-Federal lands (BLM 2019i, 2019j), IDFG big game and fisheries information (IDFG 2019a, 2019b, 2019c, 2019d), and Yellowstone cutthroat trout population data (Montana Fish, Wildlife and Parks 2019).

3.16.2 Affected Environment

3.16.2.1 Federal Lands

3.16.2.1.1 Terrestrial Wildlife

Common wildlife associated with the native vegetation types identified on the Federal lands include dusky grouse, cottontail rabbit, Columbia sharp-tailed grouse, chukar, gray partridge, wild turkey, mule deer, and Rocky Mountain elk (BLM 2010). Greater sage-grouse may be incidentally observed on Federal lands, but Federal lands are not identified as habitat in the BLM Greater Sage Grouse Plan Amendments. Species observed during field surveys include red-tailed hawk, red-winged blackbird, meadowlark, magpie, chukar partridge, Hungarian partridge, golden eagle (nesting), rock dove (breeding activity prevalent in cliff substrate), swallow species, Brewer's sparrow, pinyon jay, Virginia's warbler, mountain cottontail, black-tailed jackrabbit, and montane vole. The Brewer's sparrow, golden eagle, pinyon jay, green-tailed towhee, and Virginia's warbler are FWS Birds of Conservation Concern (BCC) (FWS 2019). Additional BCC that may be found on Federal lands include Clark's grebe, lesser yellowlegs, Lewis's woodpecker, long-billed curlew, marbled godwit, olive-sided flycatcher, sage thrasher, willet, Williamson's sapsucker, and willow flycatcher. The Federal lands are within Bird Conservation Region 9 (Great Basin).

During surveys, three large stick nests were documented on cliff substrate within the Federal lands; one nest was occupied by a golden eagle that was incubating the nest. The other two nests were not occupied. One perched/soaring golden eagle was also observed. No other raptor nests were documented during raptor surveys (BLM 2019i, 2019j).

The Federal lands are within mule deer winter range and within IDFG Game Management Unit 70. Big game identified in this unit include mule deer, elk, mountain lion, wolf, and moose (IDFG 2019b). Approximately 393 acres of mule deer winter range habitat overlaps with the Federal lands associated with the Proposed Action and Alternative A, and 465 acres with the Federal lands associated with Alternative B (Appendix C, Map 23).

The Federal lands are not within any special status species priority areas and the FWS has not identified any threatened or endangered wildlife as occurring or potentially occurring on the Federal lands (BLM 2010; FWS 2019). Due to the lack of any occurring or potentially occurring threatened or endangered wildlife species, potential impacts on Endangered Species Act (ESA)-listed species would not occur and these species are not further analyzed in this EIS.

The BLM lists 29 sensitive terrestrial species in the Pocatello Field Office area (BLM 2010), and the native vegetation types on the Federal lands (see Section 3.14, *Vegetation*) could support many of these species. However, sensitive species that may be present on the Federal lands are more likely to be the species associated with the native grassland and shrub habitats that dominate the Federal lands. These species may include pygmy rabbit, cliff chipmunk, kit fox, Uinta chipmunk, greater sage-grouse, Brewer's sparrow, Virginia's warbler, ferruginous hawk, loggerhead shrike, prairie falcon, sage sparrow, Columbian sharp-tailed grouse, and common garter snake. As previously stated, during field surveys,

Brewer's sparrow and Virginia's warbler were observed; no other BLM sensitive species were documented (BLM 2019j).

3.16.2.1.2 Fish

Fish species potentially occurring in the analysis area include those documented in the Portneuf River watershed. A short segment (approximately 67 feet) of the Portneuf River flows through the northwestern corner of the Federal lands. Documented native fish species in the Portneuf River include longnose dace, mottled sculpin, Paiute sculpin, mountain sucker, bluehead sucker (also known as green sucker), redbelt shiner, specked dace, Utah chub, mountain whitefish, Utah sucker, and Yellowstone cutthroat trout; nonnative species include rainbow trout, brown trout, brook trout, and common carp (IDFG 2019c; BLM 2010; Sigler and Zaroban 2018). From American Falls Reservoir upstream to Pocatello (near the Federal lands), the Portneuf River receives considerable spring water and has desirable water temperatures for trout. From Pocatello upstream to Marsh Creek, the river contains very few trout, receives very little fishing pressure, and is severely affected by sediment, irrigation withdrawals, damaged stream banks, and high water temperatures. In addition, through Pocatello, the river was channelized and directed through a flat-bottom, vertical-sided cement flume that is a partial barrier to upstream movement (IDFG 2019c).

The Federal lands are not within any special status species priority areas and the FWS has not identified any threatened or endangered aquatic species as occurring or potentially occurring in waterbodies on or around the Federal lands (BLM 2010; FWS 2019). In addition, no Pacific Coast salmonids are listed in the Portneuf River watershed (NOAA 2016). Therefore, potential impacts on federally listed aquatic species are not further analyzed in this EIS. The Yellowstone cutthroat trout is a BLM Type 2 special status species¹¹ that has been documented in the Portneuf River (including within the Federal lands) and numerous tributaries throughout the watershed, including City Creek, Gibson Jack Creek, Mink Creek and tributaries, Rapid Creek and tributaries, Marsh Creek and tributaries, Robbers Roost Creek, Harkness Creek, East Bob Smith Creek, Dempsey Creek, Fish Creek, Pebble Creek and tributaries, Twentyfour Mile Creek, and Toponce Creek (Montana Fish, Wildlife and Parks 2019). The nearest of these tributaries to the Federal lands is City Creek, which is approximately 5.25 miles upstream of the point where the Portneuf River crosses the Federal lands (Montana Fish, Wildlife and Parks 2019).

The Shoshone-Bannock Tribes value fish as an important component of tribal diets. The Idaho Department of Health and Welfare maintains fish consumption advisories for the Portneuf River and the American Falls Reservoir due to high levels of mercury (IDHW 2019). High levels of mercury can accumulate in fish and result in adverse health impacts on those who consume fish regularly. As indicated in Table 3-8, the gypsum stack slurry would contain a relatively small amount of mercury (0.0002U–0.017 mg/L).

3.16.2.2 Non-Federal Lands

Common wildlife associated with the native vegetation types identified on the non-Federal lands, voluntary mitigation Parcel A, and voluntary donation Parcel B would be the same species found on the Federal lands due to similar vegetation types. As on the Federal lands, greater sage-grouse may be incidentally observed on non-Federal lands, voluntary mitigation Parcel A, and voluntary donation Parcel B, but these lands are not identified as habitat in the BLM Greater Sage Grouse Plan Amendments. Species observed during field surveys on the non-Federal lands included red-winged blackbird, meadowlark, magpie, American robin, Canada goose, raven, and mule deer; coyote/fox dens were also

¹¹ BLM Type 2 special status species are defined as range-wide/globally imperiled species.

noted. No active or inactive raptor nests and no soaring or foraging raptors were documented on the non-Federal lands during surveys.

Although specific wildlife surveys were not conducted on voluntary mitigation Parcel A and voluntary donation Parcel B, similar species assemblages to those on Federal and non-Federal lands are expected based on habitat present and proximity to surveyed parcels. The BCC species that may occur on the non-Federal lands, voluntary mitigation Parcel A, and voluntary donation Parcel B are the same 15 species that may occur on the Federal lands (FWS 2019). Most of the non-Federal lands and part of voluntary mitigation Parcel A are within mule deer crucial winter range¹² and the Blackrock Big Game Wildlife Area, as identified in the Pocatello RMP (BLM 2012), and within IDFG Game Management Unit 71 (Appendix C, Map 23). Statistically corrected aerial surveys conducted by the IDFG in 2019 estimated the mule deer population in Game Management Unit 71 at 3,138 individuals. In Caddy Canyon and Blackrock Drainages, which are within or near the non-Federal lands and voluntary mitigation Parcel A, approximately 639 mule deer were counted during the aerial survey. During ground surveys in April 2019, over 30 mule deer were observed on the non-Federal lands. Big game identified in Game Management Unit 71 include mule deer, elk, bear, mountain lion, wolf, and moose (IDFG 2019d). Approximately 551 acres and 31 acres of crucial mule deer winter range overlap with the non-Federal lands and voluntary mitigation Parcel A, respectively. Approximately 212 acres of mule deer winter range overlap with voluntary donation Parcel B (Appendix C, Map 23).

The non-Federal lands, voluntary mitigation Parcel A, and voluntary donation Parcel B are not within any special status species priority areas and the FWS has not identified any threatened or endangered wildlife as occurring or potentially occurring on the Federal lands (BLM 2010; FWS 2019). Due to the lack of any occurring or potentially occurring threatened or endangered wildlife species, potential impacts on ESA-listed species would not occur and these species are not further analyzed in this EIS.

Shrub, conifer, and hardwood are the dominant native vegetation types on the non-Federal lands, voluntary mitigation Parcel A, and voluntary donation Parcel B (see Section 3.14, *Vegetation*), and BLM sensitive species associated with these habitat types include pygmy rabbit, cliff chipmunk, kit fox, Uinta chipmunk, greater sage-grouse, Brewer's sparrow, ferruginous hawk, loggerhead shrike, prairie falcon, sage sparrow, calliope hummingbird, Columbian sharp-tailed grouse, flammulated owl, Hammond's flycatcher, Lewis' woodpecker, Northern goshawk, Olive-sided flycatcher, Williamson's sapsucker, Virginia's warbler, boreal toad, and common garter snake. No BLM sensitive species were observed on non-Federal lands or voluntary mitigation Parcel A during surveys.

3.16.2.2.1 Fish

The Portneuf River or fish-bearing tributaries do not flow through or occur in close proximity to non-Federal lands or voluntary mitigation Parcel A (the nearest distance between the non-Federal lands and the Portneuf River is approximately 0.4 mile). Several intermittent streams in the Blackrock Canyon drainage occur on non-Federal lands and one intermittent stream occurs on voluntary mitigation Parcel A, but they likely lack the flow volume, flow permanence, and connectivity to the Portneuf River or West Fork Rapid Creek (voluntary mitigation Parcel A only) necessary to support any fish populations. One

¹² *Crucial winter range is an area that is composed of two IDFG-defined areas: winter game concentration areas and severe winter range. Winter concentration areas are the part of the winter range where densities are at least 200 percent greater than the surrounding winter range density during the same period used to define winter range in the average five winters out of ten. Severe winter range is the part of the overall range where 90 percent of the individuals are located when annual snowpack is at its maximum and/or temperatures are at a minimum in the two worst winters out of ten.*

perennial stream on voluntary donation Parcel B, Michaud Creek, is likely occupied by fish, and Montana Fish, Wildlife and Parks (2019) indicates the stream is historic Yellowstone cutthroat trout habitat.

3.16.3 Direct and Indirect Effects

3.16.3.1 Proposed Action

The Proposed Action would have no direct effects on fish and wildlife; however, the transfer of ownership in the Federal and non-Federal lands could result in indirect effects due to the change in fish and wildlife and habitat management associated with transferring lands between a private entity and a Federal land management agency. In addition, the Proposed Action would make the Federal lands available for reasonably foreseeable actions that could affect fish and wildlife. Refer to Section 3.16.4 (*Cumulative Effects*) for additional information on these cumulative effects associated with reasonably foreseeable actions on the Federal land.

The transfer of 719 acres of land out of Federal ownership would result in the Federal lands no longer being subject to the BLM's fish and wildlife management actions or best management practices described and identified in the Pocatello RMP. The fish and wildlife goals and objectives set forth in the Pocatello RMP would no longer apply and the implementation plan to achieve these goals and objectives would no longer be required. Specifically, Pocatello RMP Goal FW-1, *"Manage wildlife habitats so vegetation composition and structure assures the continued presence of fish and wildlife as part of an ecologically healthy system,"* and Goal FW-2, *"Provide for the diversity of native and desired non-native species as part of an ecologically healthy system,"* would no longer apply after the Federal lands are transferred out of Federal administration.

The Proposed Action would also transfer 667 acres into Federal ownership, which would result in the non-Federal lands being subject to the fish and wildlife goals, objectives, and management actions described in the Pocatello RMP. The Pocatello RMP management actions on non-Federal lands would generally result in protection of fish and wildlife and their habitats (including BLM sensitive species), which are actions not currently occurring on the non-Federal lands. In addition, acquisition of the non-Federal lands would consolidate the BLM's land administration in an area containing crucial mule deer winter range, which would result in a net gain of 551 acres of BLM-administered crucial mule deer range that would be managed in accordance with the Pocatello RMP and other Federal guidance. Under the Pocatello RMP, mule deer habitat would be managed so that vegetation composition and structure would ensure the continued presence of the species. BLM administration and management of mule deer habitat is intended to support the IDFG management objectives, as described in the *White-Tailed Deer, Mule Deer, and Elk Management Plan: Status and Objectives of Idaho's White-Tailed Deer, Mule Deer, and Elk Resources* (IDFG 1999; BLM 2012). This includes protecting riparian areas for habitat and linkage areas, restoring degraded riparian areas, and reducing the number of designated routes and roads within mule deer winter range to avoid adverse impacts.

3.16.3.2 Alternative A

Impacts on fish and wildlife would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership (voluntary mitigation Parcel A) that would be subject to the goals, objectives, and management actions for fish and wildlife identified and described in the Pocatello RMP. In addition, the acquisition of voluntary mitigation Parcel A would further consolidate the BLM's land administration in an area containing crucial mule deer winter range, which would result in a net gain of 582 acres of BLM-

administered crucial mule deer range that would be managed in accordance with the Pocatello RMP and other guidance.

Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Fish and wildlife habitat within these lands would be subject to management objectives and actions by the new landowner.

3.16.3.3 Alternative B

Impacts on fish and wildlife would be similar to those described in Alternative A except that Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the fish and wildlife management goals, objectives, and management actions in the Pocatello RMP.

3.16.3.4 No Action Alternative

The No Action Alternative would have no direct effects on fish and wildlife. Fluoride emissions from operation of the Don Plant would continue at approximately the same levels shown in Table 3-2 for the foreseeable future and would continue to contaminate vegetation and forage for wildlife. Contaminant concentrations in vegetation surrounding the Don Plant would continue to be monitored in accordance with existing environmental compliance requirements and protocols. See Section 3.2, *Air Quality and Climate Change*, for additional information.

3.16.4 Cumulative Effects

3.16.4.1 Proposed Action

If the Proposed Action is approved, construction of the reasonably foreseeable actions of the cooling ponds and gypsum stacks on the Federal lands would permanently remove or alter 290 acres of wildlife habitat (see Section 3.14, *Vegetation*), which is less than 0.03 percent of the wildlife analysis area and approximately 0.3 percent of existing disturbed areas in the wildlife analysis area. Habitat loss or alteration would be long term and result in direct losses of smaller, less-mobile species of wildlife, such as small mammals and reptiles, and the displacement of more-mobile species into adjacent habitats. In most instances, suitable habitat adjacent to disturbance areas would be available for use by these species. However, displacement would increase competition and could include some local reductions in wildlife populations if adjacent habitats are at carrying capacity. Potential effects could also include abandonment of young (e.g., nest abandonment or loss of eggs) or reduced reproductive success. Habitat loss and alteration would also result in an increase in habitat fragmentation, which can result in more isolated habitats that can affect population levels and shift habitat use.

Development and operation of the cooling ponds and expanded gypsum stacks on the Federal lands would result in noise, traffic, and other activities that can affect wildlife. The most common wildlife responses to noise and human presence are avoidance or accommodation. Avoidance would result in displacement of animals from an area larger than the actual disturbance area. The extent of wildlife avoidance due to reasonably foreseeable action activity may range from no response to fleeing response, as responses vary from species to species and can even vary between individuals of the same species. In addition, after initial avoidance of human activity and noise-producing areas, some wildlife species may acclimate to the activity and re-occupy areas previously avoided.

Potential effects on mule deer from the reasonably foreseeable actions on the Federal lands would include the long-term reduction of approximately 141 acres of mule deer winter range habitat on the Federal lands and 57 acres on private lands abutting the Federal lands from vegetation removal. This

impact area constitutes 0.08 percent of the mule deer analysis area (i.e., IDFG Game Management Unit 70) and approximately 0.8 percent of existing disturbed areas in the mule deer analysis area. In addition, mule deer may experience increased mortality rates due to increased human activities and vehicle use on roads associated with development and operation of cooling ponds and gypsum stacks. Vehicle traffic to and from the Don Plant may inadvertently injure or kill individuals and local populations may experience higher levels of mortality due to road use.

The three large stick nests (including one occupied by a golden eagle) identified during surveys are not within the disturbance footprint of the cooling ponds and expanded gypsum stacks, but are located on rock outcrops lining the west canyon gypsum stack expansion area. The occupied golden eagle nest identified during surveys is approximately 37 feet from the edge of the disturbance area. If this nest is still present during development of cooling ponds and gypsum stacks, Simplot may need to comply with the Bald and Golden Eagle Protection Act and may need to obtain a permit from the FWS. Noise, human activity, and disturbance resulting from the reasonably foreseeable actions would decrease the availability of eagle foraging habitat in the surrounding areas and could result in abandonment of any occupied nests, even if the nest structure is not physically removed or altered. Construction activities that take place in proximity to an occupied nest during the nesting season could reduce nesting success and result in abandonment of young.

Simplot also anticipates installing new electrical powerlines. If the powerlines lines are constructed above ground, they would present a long-term collision risk to birds. Collisions with powerlines represent a major source of bird mortality in the United States (Manville 2005; Loss et al. 2014). Birds do not always readily recognize and avoid powerlines, particularly when fleeing from a perceived predator or when flying during poor-visibility conditions. Collision risk varies among avian species and depends on physiology and flight behavior, as well as weather and location of the powerlines in relation to high-use bird areas (Faanes 1987; Savereno et al. 1996; Bevanger 1998). The Avian Power Line Interaction Committee and the FWS released guidelines for reducing avian risks that result from interactions with powerlines (Avian Power Line Interaction Committee and FWS 2005). Simplot could implement measures from these guidelines if the electric powerlines are built above ground to avoid and minimize potential bird collisions.

If the Proposed Action is approved, construction of the reasonably foreseeable actions of the cooling ponds and gypsum stacks on the Federal lands are not anticipated to affect fisheries in the Portneuf River or watershed. Phosphate loading from groundwater has affected the water quality of Portneuf River, including reduced oxygen levels. However, Simplot entered into a Voluntary Consent Order and Compliance Agreement with the IDEQ (2008) intended to fulfill Simplot's obligations for the Portneuf River Total Maximum Daily Load. The Voluntary Consent Order established remedy goals for phosphorus in the Portneuf River based on the total maximum daily load process. Under the Voluntary Consent Order, Simplot submitted a Remedial Action Plan, which describes remedial actions to be implemented, including installing a synthetic liner on the existing gypsum stack to reduce seepage and loading of phosphorus to groundwater beneath the stack and implementation of a source control program in the Phosphoric Acid Plant to reduce releases of phosphorus to groundwater. As a result, phosphorous loading into the Portneuf River has been declining (refer to Section 3.17.4 (*Water Resources – Cumulative Effects*) for more information on water quality). The gypsum stack slurry in the expanded gypsum stacks would have similar chemical concentrations as the existing gypsum stack slurry (see Table 3-8), which include mercury and other contaminants, as well as phosphorous, that have potential to affect water quality and fisheries. The reasonably foreseeable actions on the Federal lands would result in incremental increases in concentrations of contaminants in groundwater and connected surface water resources; however, the estimated magnitude of effects on water quality resulting from

the reasonably foreseeable actions, including leakage of mercury, arsenic, and phosphorus, described in Section 3.17 (*Water Resources*), are not anticipated to adversely affect fisheries relative to baseline water quality conditions and declining trends in total concentrations of various contaminants from ongoing application of source controls and remedial actions at the Don Plant. Current fish consumption advisories for the Portneuf River and the American Falls Reservoir would remain in effect as long as deemed necessary by the Idaho Department of Health and Welfare.

No construction would occur in the Portneuf River, and the short, 67-foot segment that flows through the northeastern corner of the Federal lands is approximately 630 feet away from the nearest area of proposed disturbance. Impacts from construction of the cooling ponds could include overland runoff and introduction of contaminants such as sediment from surface-disturbing activities. However, railroad tracks and a paved road run adjacent to the riparian zone and separate the disturbance area from the riparian zone. In addition, overland runoff impacts would be avoided or significantly minimized through Simplot's SWPPP as required by the NPDES construction permit (Clean Water Action Section 402) that is administered by the IDEQ. The SWPPP and NPDES permit conditions would contain site-specific measures to avoid and minimize erosion and sedimentation and petrochemical spills. Under the NPDES permit, Simplot must document the erosion, sediment, and pollution controls it intends to use, inspect the controls periodically, and maintain the controls throughout the life of the facilities. Therefore, with the protections provided by the NPDES permitting requirements, impacts on fish would be avoided or minimized during construction.

No reasonably foreseeable actions were identified that could contribute to cumulative effects on fish and wildlife on the non-Federal lands. Following transfer of the 667 acres of non-Federal lands into BLM administration, the BLM would manage fish and wildlife habitat in accordance with the Pocatello RMP. Therefore, the Proposed Action would not contribute to cumulative effects on fish and wildlife on the non-Federal lands.

3.16.4.2 Alternative A

Cumulative effects on fish and wildlife on the Federal lands would be the same as described for the Proposed Action.

The effects on fish and wildlife on the non-Federal lands under Alternative A would be the same as described for the Proposed Action, but with the addition of the 160-acre voluntary mitigation Parcel A (including the acquired crucial mule deer habitat), which would become subject to the Pocatello RMP fish and wildlife goals, objectives, and management actions once transferred to the BLM.

3.16.4.3 Alternative B

Cumulative effects on fish and wildlife on the Federal lands would be similar to those of the Proposed Action, but with the following differences. Permanent habitat removal and alteration on the Federal lands would include 326 acres of wildlife habitat (see Section 3.14, *Vegetation*), an increase of 36 acres compared to the Proposed Action and Alternative A. This habitat impact area constitutes 0.03 percent of the wildlife analysis area and approximately 0.3 percent of existing disturbed areas in the wildlife analysis area. Potential direct effects on mule deer would include the long-term reduction of approximately 166 acres of mule deer winter range habitat on the Federal lands and 57 acres on private lands adjacent to the Federal lands, which is less than 0.1 percent of the mule deer analysis area and approximately 1.0 percent of existing disturbed areas in the mule deer analysis area.

None of the three large stick nests documented on cliff substrate are within the Alternative B Federal lands boundary and none would be removed by construction of the reasonably foreseeable actions.

The effects on fish and wildlife on non-Federal lands under Alternative B are the same as described for Alternative A.

3.16.4.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on fish and wildlife and, therefore, would not contribute to cumulative effects.

3.17 Water Resources

Internal and external scoping for the Blackrock Land Exchange EIS identified the following issue for analysis:

- What are the potential consequences of the proposed land exchange and reasonably foreseeable actions on surface water and groundwater quality due to the release and transport of contaminants of concern?

3.17.1 Analysis Methods

3.17.1.1 Analysis Area

The analysis area for direct, indirect, and cumulative effects on water resources is composed of hydrogeologic areas that contain the Federal lands, the three operable units of the EMF Superfund Site, and downgradient areas including the Portneuf River. This area encompasses water resources that may be affected by past and ongoing operation of the Don Plant and reasonably foreseeable actions on the Federal lands.

3.17.1.2 Assumptions

- Refer to Appendix H (*Water Resource Technical Report*) for assumptions used in the water resource assessment presented in this section.
- Historical releases from the Don Plant contain many chemical constituents; however, this analysis focuses on phosphorous and arsenic because they currently exceed regulatory limits, are the focus of remedial actions, and are the constituents of greatest concern for environmental consequences associated with the reasonably foreseeable actions on the Federal lands, including being the principal contaminants found in gypsum stack leachate.

3.17.2 Affected Environment

3.17.2.1 Surface Water and Groundwater Occurrence

The analysis area is at the base of the northern slope of the Bannock Range and along the western flank of the Portneuf Valley, where the range and river valley merge with the Snake River Plain in the area known as Michaud Flats, west of the city of Pocatello, Idaho. The main surface water feature in the analysis area is the Portneuf River—a perennial stream that flows generally northward across the far northeastern corner of the Federal lands and through approximately 1.5 miles of the EMF Superfund Site (Appendix C, Map 25) and enters the Fort Hall Reservation approximately 2 miles downstream of the Don Plant. The Portneuf River transitions from a losing stream to a gaining stream in the vicinity of the Interstate 86 bridge, near the northern end of the Don Plant property. Losing streams are a source of recharge to the underlying groundwater system, while the flow of gaining streams is augmented by

groundwater seepage into the stream channel. Studies by the IDEQ (2004) reported a stream flow of 78 cubic feet per second upstream of Interstate 86 and 276 cubic feet per second near Papoose Springs, approximately 1.5 miles downstream of Interstate 86. Several large springs are downstream of Interstate 86. The Portneuf River flows perennially; however, most tributary streams in the southern and eastern parts of the analysis area within the Bannock Range have intermittent/ephemeral flow (U.S. Geological Survey 1991; Bechtel Environmental, Inc. 1996) (Appendix C, Map 25).

Groundwater in the analysis area occurs as unconfined and confined aquifers. Geologic materials can be divided into the four hydrostratigraphic units shown in Table 3-14 below. American Falls Lake Beds Clay is present in the central portion of the existing Don Plant site and pinches out or was eroded away north of U.S. Highway 30 and east of the Portneuf River (IDEQ 2004). Where American Falls Lake Beds Clay is present, it forms an aquitard restricting vertical groundwater flow. Where it is not present, the upper and lower units form a continuous, unconfined aquifer that discharges to the Portneuf River through a series of springs adjacent to and underneath the river. The upper and lower aquifers become coarser-grained toward the Portneuf River, resulting in increased hydraulic conductivity and groundwater flow.

Table 3-14. Hydrostratigraphic Units in the Analysis Area

Hydrostratigraphic Unit	Lithology	Extent	Hydrologic Characteristics
Upper Zone	Sand and gravel (Michaud Gravel)	Uppermost aquifer. Overlies the American Falls Lake Beds where present.	<ul style="list-style-type: none"> • Unconfined aquifer • High hydraulic conductivity (200–700 feet per day) in Don Plant area; 1,000 feet per day north of Don Plant • Thin saturated zone (0–25 feet)
American Falls Lake Beds Clay	Mostly clay with minor silt, sand, and localized gravel	Local confining unit, not present north of U.S. Highway 30	<ul style="list-style-type: none"> • Low hydraulic conductivity; considered an aquitard • Contains depressions
Lower Zone	Silty, clayey, volcanic gravel under Don Plant, occasional lenses of loess	Grades into clean sands and gravels to the north. Divided into three subzones for modeling.	<ul style="list-style-type: none"> • Consists of a higher conductivity unit between upper and lower low conductivity units • Hydraulic conductivity in middle unit increases to the north • Upward hydraulic gradients to the north
Tertiary volcanics	Andesite bedrock	Exposed at southern end of Don Plant site and on adjacent BLM land. Covered by alluvium and loess in some areas.	<ul style="list-style-type: none"> • Low hydraulic conductivity

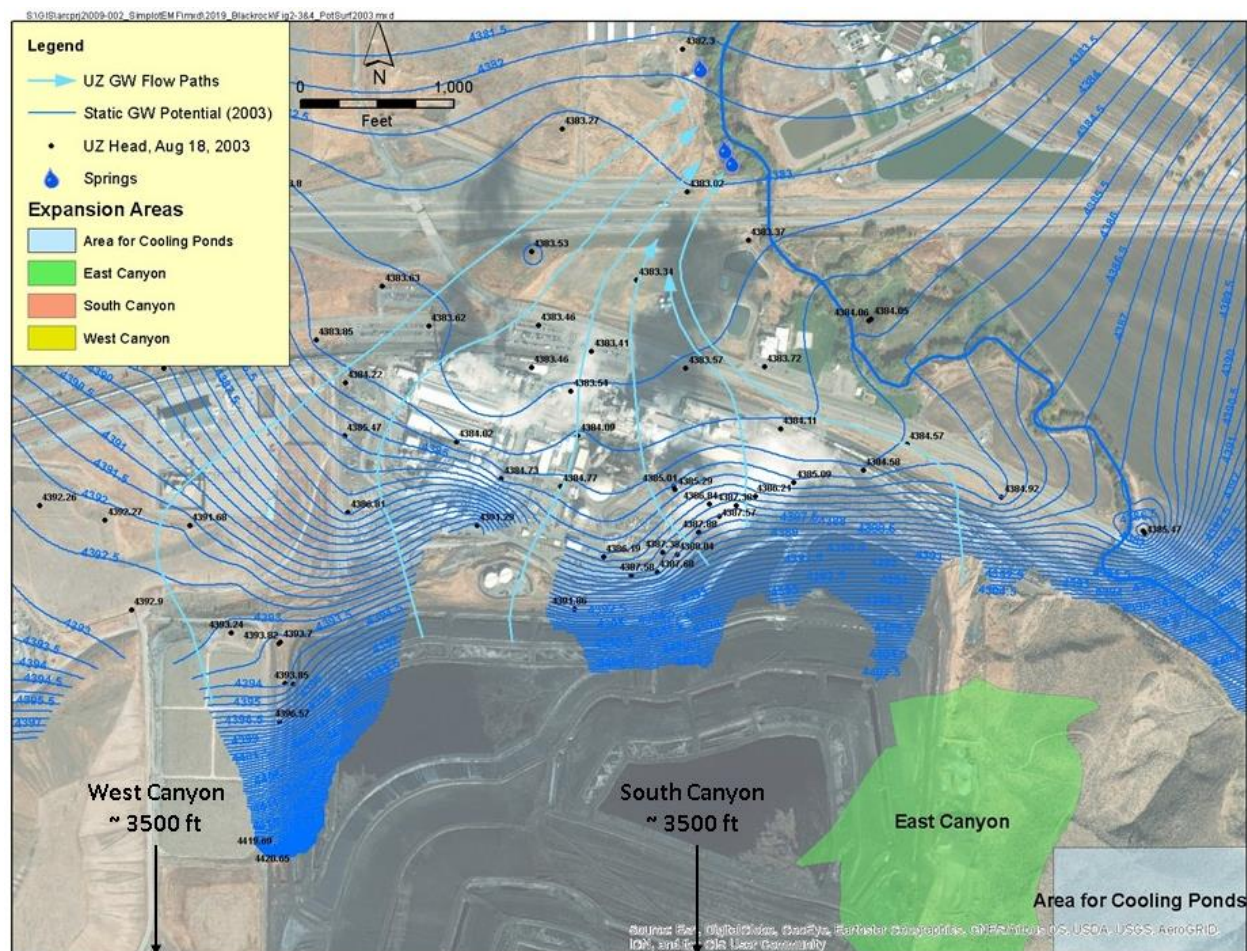
Source: Appendix H (Water Resource Technical Report).

Note: Hydrostratigraphic units listed in this table use different nomenclature and do not directly correspond to the geologic units described in Section 3.11 (Geology and Paleontology).

Water level measurements from monitoring wells within the Simplot and FMC operable units of the EMF Superfund Site indicate that horizontal groundwater flow in both upper and lower zones is generally from the Bannock Range to the north/northeast toward the Portneuf River. Groundwater flow from these operable units discharges to Batiste Spring, to the spring at Batiste Road, or to the Portneuf River between these springs (EPA 1998). Figure 3-5 and Figure 3-6 present a potentiometric map of the upper

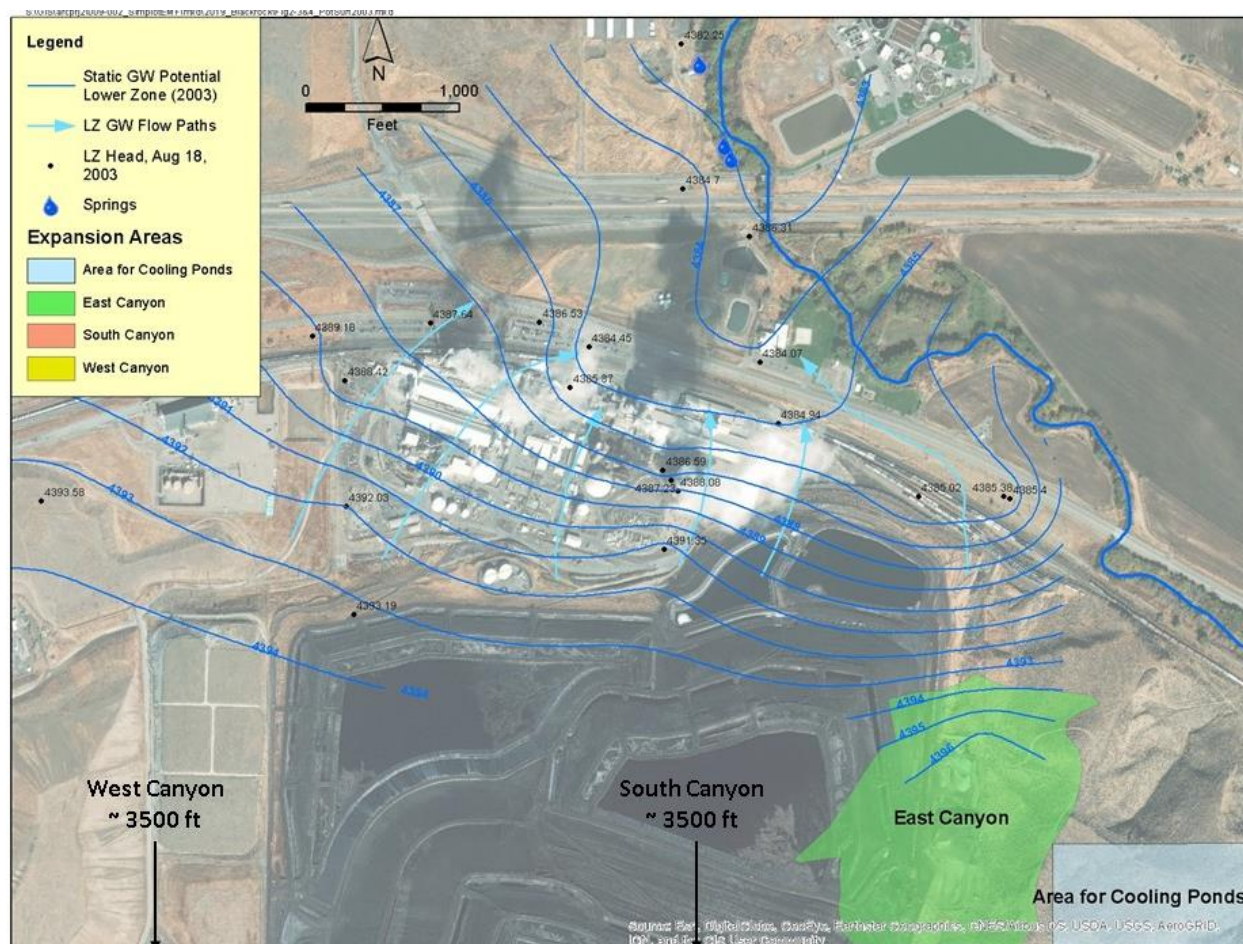
and lower aquifers from August 2003, prior to installation of groundwater extraction wells, showing the convergence of groundwater flow paths toward the river.

Figure 3-5. Groundwater Flow Upper Zone, Prior to Installation of Groundwater Extraction Wells, Year 2003



Source: Appendix H (Water Resource Technical Report).
GW = groundwater, UZ = upper zone

Figure 3-6. Groundwater Flow Lower Zone, Prior to Installation of Groundwater Extraction Wells, Year 2003



Source: Appendix H (Water Resource Technical Report).
 GW = groundwater, LZ = lower zone

Beginning in 2005, a series of groundwater extraction wells were installed in the northern part of the Don Plant site to intercept contaminated groundwater from gypsum stacks and process areas. Groundwater is extracted and reused in the plant processes at a total flow rate that is limited by the Don Plant water balance. Since 2005, additional wells have been installed and some wells have been taken offline to optimize the contaminant removal performance, within constraints imposed by the Simplot Don Plant water balance. The operation of the extraction system modified the groundwater flow locally, but the general groundwater flow direction is still toward the river as shown on Figure 3-7.

the evaluation of surface water quality. The primary constituents of concern are arsenic, phosphorous, nitrate, cadmium, chromium, sulfate, and pH originating from the gypsum stacks and process area. These contaminants are the primary constituents of concern because they either exceed regulatory limits, are the focus of remedial actions, or are components of the gypsum stack slurry that have the highest percentage contribution to Maximum Contaminant Levels (MCLs) in the groundwater. Other contaminants that have been measured in the groundwater at levels above the Safe Drinking Water Act MCLs include antimony, barium, beryllium, copper, lead, mercury, nickel, radium-226, selenium, thallium, gross alpha, and gross beta.

Contaminant concentrations are generally highest nearest the gypsum stack and process areas where releases have occurred, and generally decrease (attenuate) as groundwater flows downgradient to the north due to dilution with clean water from deeper aquifers in areas where upward gradients exist and dilution with other hydrologic/geochemical processes, and other physical and chemical processes (such as dispersion and adsorption). Contaminant concentrations also decrease with attenuation in the vadose (unsaturated) zone prior to entering groundwater.

Unlike contaminant concentration, the mass of contaminants within groundwater is generally not affected by dilution. Significant reductions in the mass of phosphorous currently discharged to the Portneuf River by contaminated groundwater are required under the Clean Water Act. Steps taken recently at the Don Plant to reduce the mass of contaminants that reach groundwater, and then discharge to the Portneuf River, are summarized below.

Groundwater contamination in the analysis area was investigated under the Comprehensive Environmental Response, Compensation and Liability Act, also known as Superfund, beginning in 1991. In 1998, the EPA issued a Record of Decision outlining the requirements for addressing soil, air, and groundwater contamination (EPA 1998). The Record of Decision required Simplot to install a groundwater extraction system to restore groundwater quality and to conduct groundwater monitoring.

The IDEQ first developed total maximum daily load requirements for the Portneuf River in 2001 under the Clean Water Act, which were revised in and added to the Portneuf River TMDL Revision and Addendum (IDEQ 2010). The Portneuf River TMDL Revision and Addendum documented that from 2004 through 2006, the annual average daily load from total phosphorus increased from under 220 pounds per day at and upstream of Batiste Spring to over 2,600 pounds per day at Siphon Road. Refer to the Portneuf River TMDL Revision and Addendum for additional information on potential sources of phosphorus in the Portneuf River and other information (IDEQ 2010). Further work by the IDEQ (IDEQ 2004) led to the signing of a Voluntary Consent Order and Compliance Agreement between the IDEQ and Simplot in 2008 that required Simplot to reduce the concentration of phosphorus in the Portneuf River from an annual median concentration of 1.25 mg/L to 0.075 mg/L by the end of 2021 (measured at the Siphon Road bridge) (IDEQ 2008a). The Portneuf River Watershed Advisory Group proposed total phosphorus concentration targets of 0.125 mg/L during the high-flow months of March through June and 0.07 mg/L during the low-flow months of July through February (IDEQ 2010). After review of total maximum daily load studies, the EPA amended the Record of Decision in 2010 to address phosphorous loading in the Portneuf River. The Interim Record of Decision Amendment supplemented the original decision and required Simplot to control releases at the source areas (the existing gypsum stack and phosphoric acid plant) by lining the gypsum stacks and implementing management controls and infrastructure improvements at the phosphoric acid plant to eliminate releases (EPA 2010). The Interim Record of Decision Amendment also restated the requirement to install a groundwater extraction system and conduct surface water and groundwater monitoring to assess the performance of the remedial actions and demonstrate the effectiveness of the source controls. The overall objective of

these measures was to restore groundwater to applicable standards and reduce the release and migration of site-related contaminants to surface water.

The existing gypsum stacks at the Don Plant were lined in five phases, with the final phase completed in 2017. Several infrastructure improvements have been made at the phosphoric acid plant to reduce or eliminate the potential for releases and resulting loading of phosphorus to soils and groundwater beneath the Don Plant. A list of recent capital infrastructure projects is provided in Appendix H (*Water Resource Technical Report*). Based on modeling estimates, the lining of the gypsum stacks reduced the phosphorus load to the environment from 42,441 pounds per day in 2010 to 7,875 pounds per day in 2018 (Formation Environmental 2019c).

The groundwater extraction system was constructed in stages and became fully operational in 2012. The system currently consists of 13 active extraction wells located between the gypsum stack and northern site boundary to intercept the affected groundwater prior to mixing with groundwater from the FMC site and unaffected areas. Phosphorus and arsenic loads have shown a declining trend since 2013, as shown in Table 3-2 in Appendix H (*Water Resource Technical Report*). The reductions are due to a combination of the source controls and extraction activities.

Groundwater monitoring is conducted throughout the Don Plant site and in downgradient areas. Surface water monitoring is conducted in the river at Batiste Road, site T2-B, Batiste Springs at Wood Bridge and Siphon Road. Siphon Road is the downstream compliance point for purposes of the Portneuf River Total Maximum Daily Load and IDEQ's Voluntary Consent Order (IDEQ 2008a). Appendix H (*Water Resource Technical Report*) describes the five areas included in the groundwater monitoring program. Monitoring data from the springs and the wells closest to the river are used to evaluate compliance with the phosphorus targets and timeframes established by the IDEQ Voluntary Consent Order (IDEQ 2008a). In addition, Simplot conducts monitoring specific to the phosphoric acid plant area including monitoring groundwater data that are collected on a frequent basis from a network of 42 monitoring and extraction wells. Refer to Appendix H (*Water Resource Assessment*) for additional information on groundwater monitoring.

Comprehensive Environmental Response, Compensation, and Liability Act remedies implemented by Simplot over the past couple of decades have resulted in improvements in groundwater and surface water quality. Groundwater samples from 13 compliance wells and 2 springs are analyzed quarterly for antimony, arsenic, beryllium, boron, cadmium, chromium, fluoride, manganese, mercury, nickel, nitrate, phosphorus, selenium, thallium, uranium, vanadium and zinc. Recent (2019 Quarter 2) results for all constituents except arsenic, boron, nitrate, phosphorus, uranium, and vanadium were below detection limits. Boron, fluoride, nitrate, uranium, and vanadium concentrations were below respective Risk-based Concentrations and MCLs and near detection limits. Arsenic concentrations at Batiste Spring (0.012 mg/L) slightly exceeded the MCL (0.10 mg/L), but were below the MCL at other sampled locations. Phosphorus concentrations ranged from 0.017 mg/L to 2.32 mg/L (Formation 2019d). Although there is not currently a Risk-based Concentration for phosphorus, the 2008 Voluntary Consent Order and Compliance Agreement established a water quality target for total phosphorus in the Lower Portneuf River of 0.075 mg/L at Siphon Road.

Compliance wells and springs were also analyzed for radionuclides gross alpha, gross beta, radium 226, and radium 228 as part of the 2019 Q2 sampling event. All radium concentrations were below detection limits and all gross alpha concentrations were below 10 picocuries per liter (pCi/L) (MCL = 15 pCi/L) (Formation 2019d). A radiological evaluation of the Lower Portneuf River concluded that there is no indication of a potential hazardous radiological exposure pathway from surface water or sediment, or for those individuals who consume trout from the Portneuf River (Beitollahi 2007). IDEQ Idaho National Laboratory Oversight staff sampled water and sediment in the Portneuf River at Batiste Road Springs

and at Siphon Road, as part of a regional study that included other watersheds, and did not identify any radiological impacts (naturally occurring or man-made) above expected background concentrations (IDEQ 2008b).

Overall, concentrations of contaminants of concern in monitoring wells, springs, and the Portneuf River have shown declining trends since source controls and extraction activities were implemented. Arsenic and nitrate currently exceed Idaho and Federal primary drinking water standards, and sulfate exceeds Idaho and Federal secondary groundwater drinking water standards at the site. Additionally, metals such as cadmium and chromium exceed Idaho and Federal drinking water standards in areas associated with low pH conditions resulting from process releases. Concentrations of contaminants in groundwater in key wells within the compliance area (e.g., monitoring wells 537A and 538A, directly upgradient of that springhead) show a generally downward trend since 2015; however, concentrations in samples taken from Batiste Spring do not show a declining trend. Concentrations of total phosphorous (a primary contaminant of concern) show a declining trend, but are still above the regulatory targets.

3.17.3 Direct and Indirect Effects

3.17.3.1 Proposed Action

The Proposed Action would have no direct effects on water resources; however, the transfer of ownership in the Federal and non-Federal lands could result in indirect effects due to the change in water management associated with transferring lands between a private entity and a Federal land management agency. In addition, the Proposed Action would make the Federal lands available for reasonably foreseeable actions that could affect water resources. Refer to Section 3.17.4 (*Cumulative Effects*) for additional information on these cumulative effects associated with reasonably foreseeable actions on the Federal land.

The Proposed Action would transfer 667 acres of non-Federal land into Federal ownership, which would result in the non-Federal lands being subject to the water resource goals, objectives, and management actions in the Pocatello RMP (BLM 2012). In general, the Pocatello RMP provides objectives and management actions that promote the protection and maintenance of watersheds and support the long-term improvement of surface and ground water quality. As a result, application of the Pocatello RMP management actions on non-Federal lands would generally support the protection of water resources.

The transfer of the 719 acres of Federal land out of Federal ownership would result in the Federal lands no longer being subject to the BLM's water resource goals, objectives, and management actions described in the Pocatello RMP (BLM 2012). As a result, the Federal lands and reasonably foreseeable actions on the Federal lands would not have the same management objectives for promoting the protection of watersheds described in the Pocatello RMP. However, Simplot would continue its monitoring and treatment program to meet its obligations under the Consent Order and remedial requirements for the EMF Superfund Site, which may be extended to the Federal land area.

3.17.3.2 Alternative A

Impacts on water resources would be similar to those described for the Proposed Action except that Alternative A would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for water resources identified and described in the Pocatello RMP.

Voluntary donation Parcel B (950 acres) would be offered for donation to the BIA or the Shoshone-Bannock Tribes. Water resources within these lands would be subject to management objectives and actions by the new landowner.

3.17.3.3 Alternative B

Impacts on water resources would be similar to those described for the Proposed Action except that Alternative B would include an additional 160 acres of non-Federal lands transferred into Federal ownership that would be subject to the goals, objectives, and management actions for water resources identified and described in the Pocatello RMP. In addition, Alternative B would have 8 fewer acres of Federal lands conveyed to Simplot that would no longer be subject to the water resource management goals, objectives, and management actions in the Pocatello RMP.

3.17.3.4 No Action Alternative

The No Action Alternative would have no direct or indirect effects on water quality; the ongoing remedial actions and trends in groundwater quality are expected to continue, as described in Section 3.17.2 (*Affected Environment*).

3.17.4 Cumulative Effects

3.17.4.1 Proposed Action

Operation of the cooling ponds and gypsum stack expansions on the Federal lands would result in minor incremental additions of phosphorous, arsenic, and other constituent loading due to leakage of leachate through the liner. Simplot retained Formation Environmental to conduct an analysis of potential effects of the Proposed Action on groundwater and surface water quality (Appendix H), which included quantitative assessment of:

- Effects on groundwater and surface water from ongoing operations to provide the baseline for evaluating cumulative effects during the assessment period.
- Additional incremental effects on groundwater and surface water from the expanded gypsum stacks and cooling ponds. The assessment period assumes the east and south gypsum stacks would be operational in 2025 and the west gypsum stack in 2040 based on expected production needs. The cooling ponds would be operational in 2025 in order to meet the requirements of the 2016 Consent Order.
- Total cumulative effects from ongoing operation of the Don Plant combined with the operating of the new cooling ponds and expanded gypsum stacks.

The modeling and analysis presented in Appendix H (*Water Resource Technical Report*) are based on an approved conceptual site model and groundwater flux calculations used since 2009 in support of requirements in the 2008 Voluntary Consent Order. The estimated impacts on water quality from ongoing operations, including source controls and extraction activities, are used to represent baseline conditions for this analysis. These baseline conditions are compared to the groundwater conditions that may result from the expansion of gypsum stacks and cooling ponds to estimate the incremental and cumulative impacts of reasonably foreseeable actions associated with the Proposed Action. The use of the predictive model for baseline conditions assumes that the groundwater and contaminant reduction systems operate as planned and modeled, and no new releases occur. The latest results of the model are presented in the *Portneuf River Final Phosphorus Concentration Target Evaluation* (Formation

Environmental 2017). The model estimates the leakage from gypsum stacks and the phosphoric acid plant and applies various attenuation factors to account for soil and groundwater conditions to estimate concentrations at the groundwater extraction areas and Portneuf River over time. Calculations are made separately for the east and west extraction well areas and summed to the total impact.

The model predicts phosphorus concentrations in the Portneuf River at Siphon Road bridge downstream of the Don Plant. Concentrations upstream of the affected area are used to represent background conditions and are calculated based on recent data, not adjusted for any future water quality improvement that may occur as a result of the total maximum daily load remedial actions. Even though the reasonably foreseeable actions would result in minor incremental increases in arsenic and phosphorus due to leakage through liners, the model results predict that Don Plant operations, including the groundwater extraction system until 2025,¹³ would result in a continuing decrease in phosphorous and arsenic concentration at the extraction wells until 2039 in response to remedial actions at the gypsum stacks and phosphoric acid plant. After 2039, the effects of the lining and phosphoric acid plant infrastructure improvements would be fully realized and concentrations at the extraction system would continue to decrease at a lower rate through the end of the assumed operating period (2084). After operations cease, concentrations at the extraction area would decline and reach 0.004 mg/L (arsenic) and 0.08 mg/L (phosphorous) by 2140. Concentrations of phosphorus at the Portneuf River are predicted to decline to the long-term average of about 0.09 mg/L by about 2030.

Operation of the cooling ponds and gypsum stack expansions on the Federal lands would result in minor incremental additions of phosphorous and arsenic loading due to leakage of leachate through the liner. The potential increases in phosphorous and arsenic concentrations were calculated using the modeling approach described in Appendix H (*Water Resource Technical Report*). Modeling results show leakage flow rates through the liners and pond would be low and would add approximately 0.214 gallon per minute to the groundwater flow. The arsenic and phosphorous loading from the new facilities would be in proportion to the size of the facilities and the leakage rates of the liners. The predictive model for estimating incremental loading to the groundwater and river uses the same liner leakage rates as the ongoing operations for calculations and assumes most of the leakage would be captured by the existing groundwater extraction system. Modeling results show that incremental arsenic and phosphorous loading from the expansion features at the extraction wells would increase to a maximum within about 3 years after the cooling ponds and gypsum stack expansions start operations. Predicted increase in the incremental concentration of arsenic peaks at less than 0.000089 mg/L in the processing facility area. Predicted incremental concentrations of phosphorus peak at less than 0.03 mg/L in the western processing facility area and less than 0.05 mg/L in the eastern processing facility area. Incremental concentrations are predicted to remain at these levels until plant shutdown. After shutdown, the concentrations would decrease until there is no additional groundwater loading from the new facilities. The maximum impact at the Portneuf River would occur by 2050, approximately 10 years after the west gypsum stack expansion goes into service. Phosphorous concentration is predicted to increase by 0.000156 mg/L.

The Portneuf River enters Fort Hall Reservation fewer than 2 miles downstream from Batiste Spring. Because site-affected groundwater enters the Portneuf River within a small stretch of the river between Swanson Road Spring and Batiste Spring, water quality impacts in the river at Fort Hall would be similar to the water quality impacts at Batiste Spring.

¹³ 2025 is used as an estimated date for modeling purposes only. Actual system shutdown will be determined by the EPA and IDEQ.

The predicted incremental and total concentrations for arsenic at the extraction wells as a result of the new facilities are shown in Table 3-15. For all years with an incremental arsenic concentration greater than 0.0 mg/L, the total predicted arsenic concentration in the groundwater extraction area is below the Safe Drinking Water Act maximum concentration level of 0.010 mg/L.

Table 3-15. Predicted Concentrations of Arsenic in the Extraction Wells (mg/L)

Date	Well 401, West Plant Area			Well 413, East Plant Area			Well 421, East Plant Area		
	Baseline	Incremental	Total	Baseline	Incremental	Total	Baseline	Incremental	Total
2019	0.2400	0.00E+00	0.2400	0.0756	0.00E+00	0.0756	0.0333	0.00E+00	0.0333
2030	0.0171	0.00E+00	0.0171	0.0060	8.05E-05	0.0061	0.0048	8.05E-05	0.0049
2040	0.0044	0.00E+00	0.0044	0.0042	8.05E-05	0.0043	0.0041	8.05E-05	0.0042
2050	0.0044	8.87E-05	0.0045	0.0042	8.05E-05	0.0043	0.0041	8.05E-05	0.0042
2060	0.0044	8.87E-05	0.0045	0.0042	8.05E-05	0.0043	0.0041	8.05E-05	0.0042
2070	0.0044	8.87E-05	0.0045	0.0042	8.05E-05	0.0043	0.0041	8.05E-05	0.0042
2080	0.0044	8.87E-05	0.0045	0.0042	8.05E-05	0.0043	0.0041	8.05E-05	0.0042
2090	0.0043	7.13E-05	0.0044	0.0041	1.60E-05	0.0041	0.0040	1.60E-05	0.0040
2100	0.0041	2.69E-05	0.0042	0.0040	6.03E-06	0.0040	0.0040	6.03E-06	0.0040
2110	0.0041	1.16E-05	0.0041	0.0040	2.70E-06	0.0040	0.0040	2.70E-06	0.0040
2120	0.0040	6.69E-06	0.0040	0.0040	1.57E-06	0.0040	0.0040	1.57E-06	0.0040
2130	0.0040	4.07E-06	0.0040	0.0040	9.35E-07	0.0040	0.0040	9.35E-07	0.0040
2140	0.0040	0.00E+00	0.0040	0.0040	0.00E+00	0.0040	0.0040	0.00E+00	0.0040

Source: Appendix H (Water Resource Technical Report).

There is no numeric water quality criterion for phosphorus in the Clean Water Act, and the State of Idaho has not promulgated a statewide numeric standard for phosphorus. Total maximum daily limits for phosphorous have been developed for the Portneuf River under Clean Water Act Section 303(d) and include a goal of 0.075 mg/L at Siphon Road bridge. The 2008 Voluntary Consent Order and Compliance Agreement mirror the total maximum daily limits and require reduction of the annual median concentration of phosphorus in the Portneuf River at the Siphon Road bridge to 0.075 mg/L by the end of 2021. The predicted incremental and total phosphorus concentrations at the Portneuf River as a result of the new facilities are shown in Table 3-16. As indicated in Table 3-16, the predicted total concentrations do not decrease to the required 0.075 mg/L for any year modeled.¹⁴ However, the maximum incremental phosphorus concentration associated with the reasonably foreseeable actions contributes only 0.2 percent of the concentration required by the 2008 Voluntary Consent Order and Compliance Agreement. Phosphorus concentrations in the Portneuf River will continue to be assessed by EPA and IDEQ and will be considered during subsequent permitting of the reasonably foreseeable actions. In addition, evaluation of data by EPA and IDEQ related to water quality and Clean Water Act requirements is ongoing and additional response actions may be found necessary, consistent with the EPA's 2010 Interim Amendment to the Record of Decision for the EMF Superfund Site (EPA 2010) and the 2008 and 2016 Consent Orders between Simplot and IDEQ (IDEQ 2008a, 2016).

¹⁴ The statistical metric for the EIS modeling differs from the modeling calculations used to determine compliance with the 2008 Voluntary Consent Order and Compliance Agreement. The EIS modeling is intended to provide an analysis of potential impacts based on existing information. Compliance with target phosphorus concentrations required by the 2008 Voluntary Consent Order and Compliance Agreement will be evaluated and determined by regulatory agencies through a separate process, independent from this EIS.

As indicated in Table 3-15 and Table 3-16, incremental increases in contaminant concentrations are estimated to peak at approximately 0.000089 mg/L in the processing facility for arsenic and 0.000156 mg/L at Siphon Bridge for phosphorus. These increases represent approximately 0.04 percent and 0.07 percent of the existing baseline (year 2019) concentrations of arsenic and phosphorus, respectively, at these monitoring locations.

Table 3-16. Predicted Cumulative Concentration of Phosphorus in the Portneuf River at Siphon Road (mg/L)

Date at River	Baseline	Incremental	Total
2019	0.2216	0.00E+00	0.2216
2030	0.1013	1.04E-04	0.1014
2040	0.0913	1.07E-04	0.0914
2050	0.0913	1.56E-04	0.0914
2060	0.0913	1.56E-04	0.0914
2070	0.0913	1.56E-04	0.0914
2080	0.0913	1.56E-04	0.0914
2090	0.0912	7.49E-05	0.0913
2100	0.0910	3.01E-05	0.0911
2110	0.0910	1.21E-05	0.0910
2120	0.0909	6.40E-06	0.0909
2130	0.0909	4.13E-06	0.0909
2140	0.0909	0.00E+00	0.0909

Source: Appendix H (Water Resource Technical Report).

Total concentrations of arsenic in the processing area and phosphorus in the Portneuf River at Siphon Bridge have shown declining trends since implementation of source controls and groundwater extraction activities at the Don Plant. These declining trends in total concentrations of arsenic and phosphorus are predicted to continue under the Proposed Action despite incremental additions to phosphorous and arsenic loading due to leakage through liners of the proposed gypsum stacks and cooling ponds. Total arsenic concentrations in groundwater at well 401 in the West Plant Area are estimated to be higher during years 2050 to 2100 as a result of the Proposed Action, with a maximum incremental addition of 0.000089 mg/L (see Figure 5-16 and Table 5-11 in Appendix H). Total phosphorus concentrations at Siphon Road are estimated to be higher during years 2030 to 2100 as a result of the Proposed Action, with a maximum incremental addition of 0.000156 mg/L (see Figure 5-19 and Table 5-14 in Appendix H). Estimated concentrations of these constituents are approximately the same, regardless of whether the reasonably foreseeable actions occur, for the remainder of the cumulative effects assessment period—2019–2140.

The calculated contribution to MCLs of other contaminants of concern in groundwater and surface water from the reasonably foreseeable actions are anticipated to be minimal. Refer to Table 5-7 and Table 5-8 in Appendix H (Water Resource Assessment) for additional information on modeled contributions to concentrations of other contaminants of concern from the reasonably foreseeable actions.

As described in Section 2.1.3.1.2 (Future Gypsum Stack Expansion), the conceptual design of the gypsum stack expansions includes a compacted gypsum perimeter containment dike and prepared subgrade (compacted, firm, and smooth graded surface) that is covered with a liner (HDR, Inc. 2018). If a failure in the gypsum stack liners were to occur due to improper installation, geotechnical stresses, earthquakes,

or other factors, the contaminants in the gypsum stack slurry (see Table 3-8) could migrate into groundwater, resulting in adverse impacts on water resources. The extent and severity of potential impacts on water resources from a liner failure would depend on the size of the liner failure, the amount of time it takes to detect a failure, and application of remedial actions to address the liner failure. In the event of any failures of the liners and contamination, Simplot would coordinate with IDEQ, EPA, and other appropriate parties on remedial actions. Any liner approved in the future through State and Federal permitting processes will meet or exceed the impermeability and durability standards of the current liner system used in the existing gypsum stacks that was approved by the IDEQ. Refer to Appendix E (*Feasibility Study*) for additional information on the liner system for the proposed gypsum stack expansions.

3.17.4.2 Alternative A

Cumulative effects on water resources would be the same as described for the Proposed Action.

3.17.4.3 Alternative B

Simplot anticipates that the reconfigured gypsum stack expansions under Alternative B would have approximately the same gypsum waste disposal capacity as the gypsum stack expansions that would be developed as a result of the Proposed Action. Therefore, the total mass of phosphorous and arsenic loads contributed to the groundwater due to leakage through the pond and gypsum stack liners is anticipated to be similar to those modeled in the *Blackrock Land Exchange Water Resource Technical Report* (Appendix H) and summarized in the description of cumulative effects from the Proposed Action. However, compared to the Proposed Action, the location of the Alternative B gypsum stack expansions is anticipated to eliminate additional loading to the west canyon area, while increasing loading to in the east and south canyon areas. This could result in higher phosphorous and arsenic loading to groundwater extraction wells on the eastern side of the Don Plant site and could change the duration of maximum concentrations, but is unlikely to affect the overall downward trend in concentrations resulting from the lining of the existing gypsum stacks and continued application of other source controls.

3.17.4.4 No Action Alternative

Under the No Action Alternative, impacts on water resources are expected to be similar to those under existing conditions and the remedial actions and trends described in Section 3.17.2.2 (*Surface Water and Groundwater Quality*) would continue. Failure to obtain the Federal lands for expansion of the gypsum stacks would eliminate the potential leaching of contaminants from the expanded gypsum stacks. In addition, if Simplot is unable to develop a feasible alternative strategy for gypsum disposal, the existing gypsum stack is projected to reach design capacity by 2031, which may result in closure of the Don Plant. As a result, potential impacts on water resources associated with production at the Don Plant would be reduced, compared to the action alternatives.

3.18 Socioeconomics and Environmental Justice

3.18.1 Analysis Methods

Internal and external scoping for the Blackrock Land Exchange EIS identified the following socioeconomic and environmental justice issues for analysis:

- How would the proposed land exchange affect the property tax base for Bannock and Power Counties?
- What effects would the reasonably foreseeable actions on the Federal lands have on local and regional economies?
- Would the proposed land exchange and reasonably foreseeable actions on the Federal lands have a disproportionately adverse effect on the Fort Hall Reservation and any environmental justice communities?

3.18.1.1 Analysis Area

The analysis area, or socioeconomic study area (SESA), for direct, indirect, and cumulative effects on socioeconomic and environmental justice is composed of Bannock and Power Counties and potentially affected environmental justice communities. This encompasses local economies within which most social and economic effects from the proposed land exchange would occur.

3.18.1.2 Assumptions

The EIS will adopt various assumptions regarding inputs and outputs to the IMpact Analysis for PLANning (IMPLAN) economic model specified in the *Socioeconomic Technical Report* prepared by ICF (Appendix G).

3.18.2 Affected Environment

The SESA includes Bannock County and Power County, which encompass the communities in Idaho that are most likely to experience socioeconomic impacts from the proposed land exchange. This section describes existing socioeconomic conditions in Bannock and Power Counties that could be affected by the proposed land exchange. The SESA is part of the southeastern Idaho region, which also includes the counties of Bear Lake, Bingham, Caribou, Franklin, and Oneida. Southeastern Idaho is generally rural, with economic activity related to agriculture, high-tech manufacturing, energy, and services and trade (Idaho Department of Labor 2019). While the two counties in the SESA are relatively similar in total land area (square miles), Bannock County is much more populous than Power County. The two counties have population densities of 78.4 per square mile and 5.5 per square mile, respectively.

3.18.2.1 Population

Population estimates for the SESA, Idaho, and the U.S. from 2010 to 2018 are provided in Table 3-17 below. As of 2018, Bannock County was home to over 87,000 residents while Power County had fewer than 8,000 permanent residents. Bannock County's population grew by approximately 5 percent between 2001 and 2018, while Power County's population decreased slightly over that period. Both counties grew at slower rates than the population of Idaho or the U.S. as a whole. Bannock County is home to the two largest population centers in the southeastern Idaho region, which are Pocatello (54,331) and Chubbuck (13,922). Power County's largest population center is the city of American Falls,

which had a population of 4,457 as of 2010 (USCB 2010). The Fort Hall Reservation was home to approximately 5,955 residents in 2017, the most recent year for which data were available.

Table 3-17. Selected Population Characteristics

Area	2010 Population	2018 Population	Change	Percent Change
Bannock County	82,839	87,138	4,299	5
Power County	7,817	7,768	-49	-1
Fort Hall Reservation	5,351	5,955	604	11
Idaho	1,567,582	1,754,208	186,626	12
United States	308,745,538	327,167,434	18,421,896	6

Sources: 2010 population data from USCB 2010. 2018 population data from USCB 2019a, except for the Fort Hall. Fort Hall Reservation data were not available for 2018. 2017 Fort Hall Reservation data from USCB 2019b.

While the population of the state of Idaho is projected to increase over the 10-year period from 2016 to 2026, the population of the southeastern Idaho region is projected to decrease slightly. By 2026, the state is projected to have 1,882,525 residents (12 percent increase), while the southeastern region is projected to have 161,757 residents (greater than 3 percent decrease) (Idaho Department of Labor 2018).

In 2018, construction began on a new interchange on Interstate 15 north of Pocatello. The new interchange is part of the Northgate District, a planned walkable community that will include thousands of new homes, a technology park, a shopping district, and medical expansion, among other development. Currently there are over 10,000 homes projected to be installed, alongside new commercial and retail space (Northgate Pocatello 2019).

The city of Pocatello is also home to a new Federal Bureau of Investigation data center expansion project that is set to be completed in 2019. Construction of the \$100 million data center and parking garage is expected to create over 1,700 new jobs and have a total economic impact of \$158 million (East Idaho Business Journal 2018). The economic activity from these two projects could drive population growth in Bannock County in the near future.

3.18.2.2 Employment, Unemployment, and Multi-Year Trends

In 2017, the civilian labor force in the SESA was approximately 45,000, and nearly 48,000 if the labor force of the Fort Hall Reservation is included. Approximately 46,000 or 96 percent of those in the labor force were employed as of 2017 (Table 3-18). In 2017, Bannock County's 3.1 percent unemployment rate was slightly lower than the statewide average unemployment rate of 3.2 percent, while Power County's rate was slightly higher at 3.4 percent. Between 2010 and 2017, the unemployment rate decreased in Bannock and Power Counties by 4.9 percent and 5.8 percent, respectively (Bureau of Labor Statistics 2019). Bannock County has a labor force that is roughly ten times higher than that of Power County, and therefore is a larger contributor to total employment in the SESA.

Table 3-18. Labor Force, Employed, and Unemployed

Location	Labor Force			Employed			Unemployed			Unemployment Rate		
	2010	2015	2017	2010	2015	2017	2010	2015	2017	2010	2015	2017
Idaho	761,060	795,989	834,696	692,827	762,282	807,820	68,233	33,707	26,876	9.0%	4.2%	3.2%
Bannock County	41,095	41,969	41,530	37,813	40,274	40,250	3,282	1,695	1,280	8.0%	4.0%	3.1%
Power County	3,872	3,885	3,959	3,515	3,701	3,823	357	184	136	9.2%	4.7%	3.4%
Fort Hall Reservation	2,193	2,576	2,502	1,902	2,048	2,003	291	528	500	13.3%	20.5%	19.9%

Sources: Bureau of Labor Statistics 2019; USCB 2017a, 2017b.

3.18.2.3 Industry-Level Employment and Average Earnings

The largest industries for employment are government (18 percent of total employment), health care and social assistance (13 percent), and retail trade (11 percent). Since 2010, the SESA has experienced significant employment growth in management of companies and mining. Employment in the management industry grew by 255 percent, adding 577 jobs over the 8-year time period. Although mining employment increased by 58 percent, only 11 new jobs were added during the time period, totaling 30 jobs in 2017. Four industries saw decreases in total employment between 2010 and 2017 (manufacturing, transportation and warehousing, information, and administrative and support and waste management and remediation services). The largest drop in employment was in the information sector, where the total number of jobs decreased by 75 jobs, or 14 percent, from 2010 to 2017 (Bureau of Economic Analysis 2019).

3.18.2.4 Housing

According to the U.S. Census Bureau (USCB) 2017 American Community Survey, Bannock County has a total of 33,870 housing units, of which 719 are vacant for rent and 660 are vacant for seasonal, recreational, or occasional use. Power County has a total of 2,992 housing units, of which 33 are vacant for rent and 53 are vacant for seasonal, recreational, or occasional use. While Bannock County has a higher number of total units, the percentage of total vacant units for rent is higher in Power County (15 percent) compared to Bannock County (9 percent) (USCB 2017c).

3.18.2.5 Community Services

The SESA is served by five school districts, including two districts in Bannock County (Marsh Valley Joint School District #21 and Pocatello School District #25) and three districts in Power County (American Falls Joint High School District #381, Arbon Elementary School District #382, and Rockland School District #382). The Don Plant is a major contributor to tax revenues in Bannock and Power Counties and associated tax expenditures on public school districts. In addition to these five public school districts in the SESA, the Fort Hall Reservation is served by Shoshone-Bannock School District #512, which is made up of the Shoshone-Bannock Junior and Senior High School.

The Bannock County Sheriff's Department consists of 22 deputies who provide constant law enforcement services to all the unincorporated areas of the county and to four contracted municipalities. The Power County Sheriff's Office is staffed by a total of 26 professionals working across several divisions. The Fort Hall Police Department operates under the Indian Self-Determination and

Education Assistance Act of 1975 (Public Law 93-638) for Law Enforcement Services and serves the community of the Shoshone-Bannock Tribes on the Fort Hall Reservation, Idaho.

Fire protection services in Bannock County are provided by municipal fire departments, each with their own fire district. Within Power County, fire protection services within the city of American Falls and the surrounding area are provided by the American Falls Fire Department. The American Falls Fire Department consists of one fire station with 19 paid-per-call firefighters. The city of Rockland also has its own volunteer fire department. The Fort Hall Reservation is protected by the Eastern Fire District, the Fort Hall Fire District, and the City of Chubbuck Fire Department, as well as an agreement with the BLM's Idaho Falls District Fire Program.

The SESA is in District 6 of the Southeastern Idaho Public Health District. The district provides non-critical community health services within the SESA at clinics in Pocatello (Bannock County) and American Falls (Power County). Medical treatment within Bannock County is provided at the Portneuf Medical Center in Pocatello. Medical treatment within Power County is provided by the Power County Hospital District in American Falls and Power County Emergency Medical Services. The Shoshone-Bannock Community Health Center provides primary care and urgent care health services for members of the Fort Hall Reservation.

Refer to Appendix G (*Socioeconomic Technical Report*) for additional information on community services.

3.18.2.6 Environmental Justice

Executive Order 12898 directs all Federal agencies to focus attention on the human health and environmental conditions for low-income populations, minority populations, or Indian tribes. The purpose of Executive Order 12898 is to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on low-income populations, minority populations, or Indian tribes that may experience common conditions of environmental exposure or effects associated with a plan or project. Executive Order 12898 requires Federal agencies to ensure opportunities for effective public participation by identified potentially affected low-income populations, minority populations, or Indian tribes that are considered low-income and minority populations. Executive Order 12898 also applies to tribes that are present or exercise treaty rights in the area. The Shoshone-Bannock Tribes have tribal treaty rights in the Federal lands proposed for exchange. Historic and current land use by these Native American groups is visible through the presence of culturally sensitive sites and other tribal resources. In their scoping comments, the Shoshone-Bannock Tribes claim that sacred sites in the area of the Federal lands include possible burial sites; spiritual sites; springs sites; camp sites; healing locations; battleground sites; trails; hunting, fishing, and gathering locations; scenery and visual resources; and audio resources (BLM 2019d). The Tribes also value landscape features in the Federal lands proposed for exchange including Howard Mountain and canyons surrounding the mountain that have long held significance for the Shoshone-Bannock Tribes (BLM 2019d).

Environmental justice is analyzed within the SESA, with special emphasis given to the Fort Hall Reservation due to its proximity to the Federal lands proposed for exchange, and because the Shoshone-Bannock Tribes have tribal treaty rights in the Federal lands proposed for exchange.

For the purposes of this analysis, a community is considered an environmental justice community if the total number of individuals living below the poverty level or total minority population, as defined by the USCB, is 50 percent or more of the community or is "meaningfully greater" than the reference community (the state of Idaho or the SESA). To provide a conservative assessment, this analysis applied a standard of 10 percentage points higher than in the comparison area. By applying this analysis criteria

to 2013–2017 American Community Survey 5-year estimates, the following were identified as potential environmental justice low-income and minority communities (Table 3-19):

- Fort Hall Reservation – American Indian minority population, total minority population
- Power County – Hispanic or Latino minority population, total minority population

Table 3-19 provides details on the minority and low-income populations locally and in the state and county reference populations. This table is intended to demonstrate the data used to identify the two potential low-income and minority communities considered in the analysis.

Table 3-19. Number and Percent of People in Minority or Low-Income, 2017

Geography	Total Population	Black or African American alone	American Indian or Alaskan Native alone	Asian or Pacific Islander alone ¹⁵	Other and Two or More Races	Hispanic or Latino ¹⁶	Total Minority Population	Income Below Poverty Level ¹⁷
Idaho	1,716,943	15,052 (0.9%)	29,973 (1.7%)	30,059 (1.8%)	42,045 (2.4%)	215,392 (12.5%)	308,649 (18%)	15%
Bannock County	85,269	833 (1.0%)	3,130 (3.7%)	1,566 (1.8%)	2,033 (2.4%)	7,429 (8.7%)	13,602 (16%)	18%
Power County	7,600	87 (1.1%)	279 (3.7%)	53 (0.7%)	170 (2.2%)	2,619 (34.5%)	2,986 (39.3%)	12%
2-County Area	92,869	920 (1.0%)	3,409 (3.7%)	1,619 (1.7%)	2,203 (2.4%)	10,048 (10.8%)	16,588 (17.9%)	17%
Fort Hall Reservation	5,952	10 (0.2%)	3,824 (64%)	61 (1.0%)	309 (5.2%)	710 (12%)	4,368 (73%)	22%

Sources: USCB 2019c, 2017d, 2017e, 2017f.

Notes: **Bold text** indicates a potential low-income or minority community.

The EPA developed an environmental justice mapping and screening tool called EJSCREEN. Based on national data, EJSCREEN combines 11 environmental and six demographic indicators to create 11 environmental justice indices in maps and reports. The raw data for 11 environmental indicators outlined by the EPA are shown in Table 3-20 by census block groups included in the analysis area (see Appendix C, Map 24 for geographic locations of each block group analyzed). Presenting the raw data allows for a comparison of the SESA with both the state and national averages. By incorporating these environmental indicators, EJSCREEN is able to identify potential populations subjected disproportionately to adverse human health or environmental effects. The comparison to state and national averages indicates which counties and communities may be potentially more susceptible to environmental pollution. Please note that EJSCREEN is a preliminary tool not to be used to identify or label an area as an “environmental justice community.” These indicators are varied in terms of the quality of them and the information they provide about potential impacts (EPA 2018a).

¹⁵ In accordance with the minority population groups identified in guidance from the Council on Environmental Quality (1997), this column represents the sum of the “Asian alone” and “Native Hawaiian and Other Pacific Islander alone” populations.

¹⁶ People who identify as Hispanic or Latino may be of any race.

¹⁷ The USCB threshold for poverty in 2017 was \$12,752 for an individual under the age of 65, \$11,756 for an individual over the age of 65, and \$25,094 for a family of four (USCB 2018). Percentage represents all below the poverty line.

Table 3-20 presents EJSCREEN results for the SESA and compares them to state and national averages. EJSCREEN does not produce an individual report for the Fort Hall Reservation; Table 3-20 presents this population by census block group. Block group results are also displayed for Power County, which was identified as a potential low-income or minority community. The table presents the local area in comparison to the national percentile, which describes what percentage of the U.S. population has an equal or lower value, meaning less potential for exposure/risk/proximity to certain facilities, or a lower percentage minority population. Table 3-20 only presents the environmental indicators for which areas are largely below the national average, or greater than the 75th percentile.

The entire SESA is above the national average daily maximum 8-hour-average ozone of 42.5 parts per billion during the ozone season, in the 85th percentile or above. Ozone is associated with a variety of negative health outcomes, especially reduced lung function. The relatively high ozone concentration paired with the large elderly population in the analysis area, a population susceptible to ozone-induced effects, increases risks of adverse health effects from ozone.

The majority of the SESA is above the national average for lead paint in pre-1960s housing, with two block groups in Power County in the upper quartile. The lead paint indicator is not likely to be affected by the proposed land exchange and reasonably foreseeable actions.

Bannock County and two block groups of the Fort Hall Reservation are in the upper quartile for Superfund proximity. The city of Pocatello in Bannock County is home to three active Superfund sites (EPA 2019c, 2019d, 2019e). Superfund sites are contaminated areas due to hazardous waste being dumped, left out in the open, or otherwise improperly managed from manufacturing facilities, processing plants, landfills, and mining sites (EPA 2018b).

Wastewater discharge environmental indicator scores for all areas were higher than the national average except for a single block group in the Fort Hall Reservation. Wastewater discharge scores reflect reported information from the toxics release inventory on the amount of toxic chemicals released, and the chemical's relative toxicity, potential human exposure, and transport through the environment. Power County is in the 80th percentile nationally (EPA 2018a).

Table 3-20. Environmental Indicators in the Analysis Area and Percentile of the U.S.

Census Block Group	Ozone	Lead Paint	Superfund Proximity	Wastewater Discharge
Bannock County	86	62	82	77
Power County	86	65	46	80
160779601001	87	77	59	86
160779602001	85	51	37	72
160779602002	85	55	29	76
160779602003	85	79	36	77
160779602004	85	71	31	81
160779602005	85	10	31	69
Fort Hall Reservation				
160059400001	86	52	78	82
160059400002	86	57	62	40
160119400001	85	52	40	63
160119400002	85	47	51	65
160779601002	87	41	77	79

Source: EPA 2018a.

Note: **Bold text** indicates a potential environmental justice community as they are in the upper quartile for at least three indicators. Block groups 160119400001 and 160119400001 were considered in the environmental justice assessment even though they are located outside of Power and Bannock Counties because they overlap portions of the Fort Hall Reservation. Block group 160779601002 is the only one that resides entirely within both Power County and the Fort Hall Reservation.

3.18.3 Direct and Indirect Effects

3.18.3.1 Proposed Action

Should the land exchange be approved, payment in lieu of taxes for the Federal lands would no longer be available for both Power and Bannock Counties. Power County would receive an actual property tax assessment for the Federal lands that occur within the county (approximately 507 acres) if the land exchange was approved. Bannock County would receive a property tax assessment for the portion of Federal lands that occur within the county (approximately 212 acres), but would lose the property tax assessment for the non-Federal lands (approximately 667 acres) if the land exchange was approved. There would be loss of approximately 455 acres available for property tax assessment within Bannock County; however, the non-Federal lands would be available for payment in lieu of taxes.

As stated in Section 3.12 (*Livestock Grazing*), the 719 acres of Federal lands proposed for exchange yield 70 AUMs and earn \$94.50 in annual grazing fees. This grazing fee would be forgone if the Federal lands are transferred to private ownership under the Proposed Action. As explained in Appendix G, Section 2.3.3.2 (*Livestock Grazing*), the adjusted value of an AUM for cattle production, which encompasses direct economic values beyond grazing fee revenue, is \$40.75. The Federal lands currently support an estimated \$2,852.50 (70 x \$40.75) annually of direct economic value. This economic value from livestock grazing would be forgone under the Proposed Action because the Federal lands would no longer be available for livestock grazing.

The BLM does not anticipate any change to the season of use, AUMs, or other grazing management for the Blackrock or Rapid Creek allotments resulting from acquisition of the non-Federal lands; therefore, the availability of the non-Federal lands for livestock grazing is not anticipated to have an economic effect.

The Proposed Action would not create disproportionately high and adverse human health or environmental effects on minority and low-income populations. An indirect effect of all the action alternatives would be making the Federal land available for planned development activities, and the subsequent development of that land. Potential effects of these reasonably foreseeable future actions on socioeconomics are described in Section 3.18.4 (*Cumulative Effects*).

3.18.3.2 Alternative A

Power County would lose the property tax assessment for voluntary donation Parcel B (approximately 950 acres) if **Simplot's donation is accepted**. There would be a loss of approximately 443 acres of lands available for property tax assessment within Power County. Bannock County would lose the property tax assessment for the non-Federal lands and voluntary mitigation Parcel A (827 acres), but would receive a property tax assessment for the portion of Federal lands that occur within the county (approximately 212 acres) if the land exchange was approved. There would be a loss of approximately 614 acres of lands available for property tax assessment; however, the non-Federal lands and voluntary mitigation Parcel A would be available for payment in lieu of taxes.

Transfer of the 950-acre voluntary donation Parcel B from private ownership to the BIA or the Shoshone-Bannock Tribes would convey socioeconomic values associated with approximately 200 acres of irrigated agricultural lands and approximately 750 acres of improved rangeland.

Alternative A would not create disproportionately high and adverse human health or environmental effects on minority and low-income populations.

3.18.3.3 Alternative B

Should the land exchange be approved and Simplot's donation of voluntary donation Parcel B be accepted, Power County would receive an actual property tax assessment for the Federal lands that occur within the county (approximately 206 acres), but lose the property tax assessment for voluntary donation Parcel B (approximately 950 acres). There would be a loss of approximately 744 acres of lands available for property tax assessment within Power County.

Bannock County would receive a property tax assessment for the portion of Federal lands that occur within the county (approximately 500 acres), but would lose the property tax assessment for the non-Federal lands (827 acres) and voluntary mitigation Parcel A if the land exchange was approved. There would be a loss of approximately 326 acres of lands available for property tax assessment within Bannock County; however, the non-Federal lands and voluntary mitigation Parcel A would be available for payment in lieu of taxes.

Alternative B would not create disproportionately high and adverse human health or environmental effects on minority and low-income populations.

3.18.3.4 No Action Alternative

Under the No Action Alternative, the reasonably foreseeable actions of the cooling ponds and the gypsum stack expansions would not be constructed. As a result, Simplot estimates that the functional life of the Don Plant would end in 2031. Consequently, all social and economic effects associated with the Don Plant would generally end 54 years earlier than under the Proposed Action.

3.18.3.4.1 Social Conditions

Based on current staffing levels, the workforce of the Don Plant and associated Frontier building is approximately 386 full-time workers. Because Simplot operations are expected to continue as is in the short term, the No Action Alternative is not projected to affect staffing at the Don Plant or associated facilities. This means that no increase in population, effects on housing, or other social impacts (such as stresses on schools, public services, or utilities, or changes in quality of life) would occur. The SESA could experience out-migration, increased vacancy rates, and decreased housing values if the land exchange is not approved and Simplot is forced to consider siting the gypsum stack farther away from the existing facility. This option would most likely require significant funding for construction and operation of a new pipeline to transport the phosphogypsum to an offsite gypsum stack. The increased cost associated with this scenario could require Simplot to scale down operations or shut down the Don Plant entirely for an unknown period of time.

3.18.3.4.2 Economic Conditions

In 2017, the SESA economy produced over 46,000 total jobs (USCB 2017a) and the average personal per-capita income was \$36,978. The Fort Hall Reservation is economically depressed compared to the surrounding region; the average personal per-capita income was \$17,148 and the poverty rate was 21.9 percent as of 2017 (USCB 2017a). Employment and labor income in the SESA reflect the ongoing operation of the Don Plant and associated Frontier building. Because the No Action Alternative would not change staffing, it is not anticipated to add direct, indirect, and induced increases in jobs, labor

income, and output in the region during operations. Staff and expenditures associated with the No Action Alternative are the same as under the current plant operations and, therefore, the modeled annual economic impacts on the SESA are the same as those shown in Appendix G, Section 3.5.2.1 (*No Action Alternative*). However, because plant operations would likely have to shut down under the No Action Alternative, economic impacts modeled for the Don Plant would end sooner under the No Action Alternative.

As mentioned in Appendix G, Section 2.3.3.1 (*Mining*), the Idaho mining and mine processing industry has been responsible for a significant portion of Idaho's economic growth over the last century. The industry provides jobs and materials that are important to the economy. In 2014, direct mining employment estimates for the state of Idaho ranged from 4,894 by the Bureau of Economic Analysis to 2,419 by the Quarterly Census of Employment and Wages, excluding employment related to oil and gas development. During this time period, mining jobs were among the highest-paying industrial and service jobs in the state. Average earning per worker, including salary and fringe benefits, was \$100,738 in 2014 for Idaho Mining Association workers (Idaho Mining Association 2015).

Phosphate mining in particular continues to play a significant role in the southeastern part of the state. The region has some of the richest deposits of phosphate in the U.S., and it is Idaho's leading mineral commodity by value, supporting approximately \$500 million in value added and 1,800 direct employees in southeastern Idaho (Idaho Department of Lands 2019).

Mineral processing is one important component of phosphate mining and is used to manufacture fertilizers. The industry employed anywhere from 2,787 workers according to the Bureau of Economic Analysis, which included broadly all chemical manufacturing, to 944 workers according to the Quarterly Census of Employment and Wages, which included only agricultural chemical manufacturing (Idaho Mining Association 2015). The Don Plant employs 365 professionals, pays nearly \$4 million each year in taxes to State and local governments, and produces over 1,000,000 tons of various phosphate products annually. A potential closure of the plant under the No Action Alternative would have a long-term, negative effect on the economy of the SESA.

As stated in Appendix G, Section 2.3.3.2 (*Livestock Grazing*), the 719 acres of Federal lands proposed for exchange yield an estimated 70 AUMs in the SESA and earn \$94.50 in annual grazing fees. Under the No Action Alternative, this is not anticipated to change. No Federal grazing fees would be assessed for the non-Federal lands, which would remain in private ownership. As explained in Appendix G, Section 2.3.3.2 (*Livestock Grazing*), the adjusted value of an AUM for cattle production, which encompasses direct economic values beyond grazing fee revenue, is \$40.75. The Federal lands currently yield an estimated \$2,852.50 ($70 \times \40.75) annually of direct economic value, which is anticipated to continue under the No Action Alternative.

The AUMs within the non-Federal lands proposed for exchange are estimated to support 44.5 AUMs and would yield \$1,813.38 ($44.5 \times \40.75); however, this value is not part of the BLM AUM allocation and fees because the BLM does not recognize forage value on private lands. Under the No Action Alternative, the availability of the non-Federal lands for grazing, and any associated economic value derived from grazing, would be at the discretion of Simplot, and has not yet been determined.

3.18.3.4.3 Fiscal Conditions

State and local taxes and fees would continue to be collected and would contribute to government revenue in the short term under the No Action Alternative. The Don Plant and the related facilities would continue to pay approximately \$3,916,306 in real property and personal property taxes. Because the plant operations would cease sooner under the No Action Alternative, taxes would be collected for

fewer years than under the Proposed Action, resulting in long-term, adverse effects. There would be no changes to payment in lieu of taxes or the property tax base.

3.18.3.4.4 Nonmarket Values

Nonmarket value impacts depend on the proposed level of development and are closely related to social and quality-of-life impacts. The No Action Alternative would have minimal impacts on nonmarket values, as the non-Federal lands are and would remain unavailable for recreation or other uses by the public because they are private lands. In the case that the increased cost associated with siting a new gypsum stack farther away from the existing facility would require scaled-down operations or plant shutdown for an unknown period of time, any impacts from noise, human presence, and visual disturbance would decrease. This could limit disturbance of wildlife and recreationists on BLM lands surrounding the Don Plant and could increase direct and indirect nonmarket values associated with improved recreational experiences in the area and enhanced habitat for wildlife, resulting in long-term, beneficial effects.

3.18.3.4.5 Minority and Low-Income Populations

Under the No Action Alternative, minority populations within the SESA would continue to experience disproportionately high adverse impacts, as explained under Section 3.18.2 (*Affected Environment*) above. The two block groups in Power County and two block groups in the Fort Hall Reservation would continue to experience high levels of exposure to ozone, lead paint, Superfund proximity, and wastewater discharge, as shown in Table 3-20.

Air pollutant emissions from operation of the Don Plant would continue at approximately the same levels shown in Table 3-2 for the foreseeable future until Simplot develops a feasible alternative to reduce fluoride emissions. Failure to obtain the Federal lands for expansion of the gypsum stacks would require Simplot to eventually reduce production rates at the Don Plant, which would result in a reduction of air pollutant emissions. If Simplot is unable to develop a feasible alternative strategy for gypsum disposal, the existing gypsum stack is projected to reach design capacity by 2031. Closure of the Don Plant would result in cessation of all point sources associated with plant operations, as well as impacts from noise, human presence, and visual disturbance. Emissions from area and some mobile sources would continue for several decades during evaporation and draindown of the gypsum stacks and other closure activities, resulting in adverse impacts on minority populations within the SESA.

As indicated in Section 3.6 (*Hazardous or Solid Wastes*), although surface soils in the Federal lands have elevated levels of some metals and inorganics and some vegetation has elevated fluoride levels, the Superfund risk assessment identified no unacceptable human health risks and only marginal ecological risks due to fluoride in vegetation. Under the No Action Alternative, there would be no direct or indirect effects on hazardous or solid wastes, resulting in negligible impacts on minority populations within the SESA.

3.18.4 Cumulative Effects

3.18.4.1 Proposed Action

3.18.4.1.1 Social Conditions

The current workforce of the Don Plant and the Frontier building is approximately 386 full-time workers. While this direct employment would remain unchanged under the Proposed Action, Simplot anticipates a significant increase in capital expenditure if the land exchange is approved and the reasonably foreseeable expansion of Simplot facilities onto the Federal lands occur. Total capital expenditures under the Proposed Action would be approximately \$221,158,750. Operations and maintenance expenditures would also increase by approximately \$2.25 million. This direct spending has a multiplier effect on the surrounding economic region. Increased employment associated with the any new construction could increase the population of the SESA and affect housing, public services, or other quality-of-life issues.

As stated in Section 3.18.2.1 (*Population*), the population of southeastern Idaho, which includes the SESA as well as the counties of Bear Lake, Bingham, Caribou, Franklin, and Oneida, is projected to decrease through 2026 (Idaho Department of Labor 2018). This trend would likely counteract any population increase as a result of the Proposed Action, and would also likely ease any potential strain on housing availability, infrastructure, public services, and quality-of-life impacts associated with the Proposed Action. While the population of southeastern Idaho as a whole is decreasing, new projects like the Northgate District and Federal Bureau of Investigation expansion could spur population growth in urban centers such as Pocatello and Chubbuck.

As previously discussed, the SESA has a number of existing vacant housing units for rent and seasonal use. While housing options in Power County may be more limited, the majority of existing Simplot workers live in Bannock County, which has enough existing vacant units that no severe housing impacts are anticipated under the Proposed Action. There is some concern that new development projects in the city of Pocatello could cause an increasing housing shortage in the areas around Pocatello and Chubbuck; however, several new housing units are currently being constructed as part of the Northgate project.

Impacts on community services in the SESA as a result of the Proposed Action are anticipated to be minimal. The public school districts of both counties have been running below capacity, and crime incidence rates have dropped over the last year and remain below the state average. No impacts on fire protection services, health care, utilities, or quality of life are anticipated as a result of the Proposed Action.

3.18.4.1.2 Economic Conditions

Economic effects were estimated using an IMPLAN model for the SESA, the results of which are presented in Appendix G (Section 3.5, *Results*). The tables identify the direct, indirect, induced, and total effect on employment, labor income, total value added, and industry activity in the analysis area. Refer to Appendix G, Section 3.0 (*Economic Modeling*) for definitions of the types of effects and terminology referred to in this section. IMPLAN modeling input used to develop the results below consisted of ongoing employment at the plant, capital and construction expenditures in support of the Proposed Action, including direct construction employment and contractors, and ongoing operations and maintenance of the plant.

The analysis indicates that the Proposed Action and construction of the reasonably foreseeable actions of the gypsum stacks and the cooling ponds would support approximately 3,763 total jobs, generate approximately \$172.7 million in labor income, and contribute approximately \$768.3 million in industry activity annually across the region. Continued operation of the Don Plant would extend the annual jobs economic impact compared to the No Action Alternative.

A breakdown of the total economic impact by direct, indirect, and induced effects of the Proposed Action can be found in Appendix G, Section 3.5.2.2 (*Proposed Action*). For every direct job added in the region due to direct spending, the multiplier generated through IMPLAN modeling indicates that approximately 1.7 jobs are created in the regional economy. For every dollar of direct labor income, approximately \$1.6 of labor income is generated. Similarly, every dollar of direct industry activity creates an additional \$1.4 in industry activity throughout Bannock and Power Counties.

3.18.4.1.3 Fiscal Conditions

The continuation of operations at the Don Plant, which would be enabled through the Proposed Action, would ensure a long-term revenue source that would increase the counties' capacity to provide public services for their residents. The Don Plant currently contributes \$3.9 million annually in State and local taxes. While property taxes would continue to be collected for the Don Plant and Frontier building following its closure, sales and use taxes and income taxes from employees would not. The Proposed Action would delay the reduction in revenues from State and local taxes following plant closure compared to the No Action Alternative. Payment in lieu of taxes would continue to be collected for the non-Federal lands following acquisition by the BLM.

3.18.4.1.4 Nonmarket Values

Effects on nonmarket values under the Proposed Action would be greater than under the No Action Alternative because the Federal lands would be converted to an industrial landscape character. Development on public land and the resulting impacts on the natural environment and social/quality-of-life conditions could result in impacts on direct use, indirect use, and passive use nonmarket values.

Development of the Federal lands and resulting impacts on wildlife, visual resources, tribal treaty rights, tribal uses and values, and cultural resources would also decrease passive use benefits that reflect nonmarket values.

3.18.4.1.5 Environmental Justice

Under the Proposed Action, minority populations within the SESA would continue to experience disproportionately high adverse impacts, as explained under Section 3.18.2 (*Affected Environment*) above. The two block groups in Power County and two block groups in the Fort Hall Reservation would continue to experience exposure to ozone, lead paint, Superfund proximity, and wastewater discharge. Furthermore, the reasonably foreseeable actions on the Federal lands would result in minor incremental increases in phosphorous and arsenic in groundwater, resulting in impacts on minority populations within the SESA.

As stated in Section 3.2 (*Air Quality and Climate Change*), closure of the existing cooling towers would eliminate fluoride and particulate matter emissions from the towers. The new cooling ponds and gypsum stack expansions would have fluoride and particulate matter emissions associated with their operation; however, the net effect of these reasonably foreseeable actions would be a decrease in PM₁₀, PM_{2.5}, and fluoride emissions at the Don Plant. Furthermore, because of the decrease in the fluoride

emissions from the cooling towers closure, the fluoride in forage concentrations are anticipated to decrease in all forage sampling areas with no exceedances of the State standards. Similarly, the overall reduction in particulate matter emissions is anticipated to negate the effects of moving some of the emissions closer to nearby populations.

There would be a long-term net increase in operational power consumption at the Don Plant by approximately 40,000 megawatt-hours per year after construction of the cooling ponds and gypsum stacks. Based on the power mix for Western Electricity Coordinating Council Northwest subregion, this would result in an increase of greenhouse gas emissions of approximately 12,000 metric tpy of CO₂e. This is an increase of slightly more than 10 percent over current greenhouse gas emissions levels associated with the Don Plant, resulting in a slight increase of adverse impacts related to greenhouse gas emissions.

In addition to the operational emissions, construction activities associated with the development of the cooling ponds and gypsum stack expansions would result in temporary emissions of criteria pollutants and greenhouse gases. Based on the phased construction schedule, these emissions are not anticipated to result in exceedance of the NAAQS, and would not disproportionately affect minority or low-income populations.

Indirect impacts from development of the cooling ponds could include overland runoff and introduction of contaminants such as sediment and phosphorous from ground-disturbing activities. However, overland runoff impacts would be avoided or significantly minimized through Simplot's SWPPP as required by the NPDES construction permit (Clean Water Action Section 402) administered by the IDEQ. The SWPPP and NPDES permit conditions would contain site-specific measures to avoid and minimize erosion and sedimentation and petrochemical spills. Under the NPDES permit, Simplot must document the erosion, sediment, and pollution controls it intends to use, inspect the controls periodically, and maintain the controls throughout the life of the facilities. Therefore, with the protections provided by these requirements, impacts on the riparian zone along the Portneuf River would be avoided or minimized, and would not disproportionately affect minority or low-income populations.

As stated in Section 2.1.3.1.2 (*Future Gypsum Stack Expansion*), the planned gypsum stack expansions and cooling ponds would be underlain by a low-permeability liner. The liner is expected to reduce seepage and loading of phosphorus and associated contaminants to groundwater. However, as stated in Section 3.17 (*Water Resources*), operation of the proposed facilities would add phosphorous and arsenic loads to the groundwater due to leakage through the pond and gypsum stack liners. Modeling results show that arsenic and phosphorous loading at the extraction wells would increase to a maximum within about 3 years after the proposed facilities begin operations. Predicted incremental increase in the concentration of arsenic peaks at less than 0.000089 mg/L in the processing facility area. Predicted incremental concentrations of phosphorus peak at less than 0.03 mg/L in the western processing facility area and less than 0.05 mg/L in the eastern processing facility area. Incremental concentrations are predicted to remain at these levels until plant shutdown. The maximum impact at the Portneuf River would occur in 2050, approximately 10 years after the west gypsum stack expansion goes into service. Phosphorous concentration is predicted to increase by 0.000156 mg/L. The reasonably foreseeable actions on the Federal lands would therefore result in incremental increases in concentrations of contaminants in groundwater, which is connected to surface water resources that are important to minority populations within the SESA; however, the estimated magnitude of effects on water quality resulting from the reasonably foreseeable actions—including leakage of mercury, arsenic, and phosphorus, described in Section 3.17 (*Water Resources*)—are not anticipated to adversely affect fisheries that are utilized by the Shoshone-Bannock Tribes relative to baseline water quality conditions and declining trends in total concentrations of various contaminants from ongoing application of source

controls and remedial actions at the Don Plant. Current fish consumption advisories for the Portneuf River and the American Falls Reservoir would remain in effect as long as deemed necessary by the Idaho Department of Health and Welfare.

3.18.4.2 Alternative A

Cumulative effects under Alternative A would be the same as under the Proposed Action. Compared to the Proposed Action, no new reasonably foreseeable actions are being proposed under Alternative A that would cumulatively affect socioeconomic conditions or minority populations within the SESA.

3.18.4.3 Alternative B

Cumulative effects under Alternative B would be the same as under the Proposed Action, except the absence of the west canyon gypsum stack expansion would move the source of fluoride and particulate matter emissions farther from the Fort Hall Reservation, although it would be closer to residences east of the Don Plant. As under the Proposed Action, the overall reduction in fluoride and particulate matter emissions from construction of the cooling ponds is anticipated to negate the effects of moving the source of the emissions. Compared to the Proposed Action, no new reasonably foreseeable actions are being proposed under Alternative B that would cumulatively affect socioeconomic conditions or minority populations within the SESA.

3.18.4.4 No Action Alternative

The cumulative effects under the No Action Alternative would be similar to the direct and indirect effects under the No Action Alternative, as described above. If Simplot is unable to develop a feasible alternative strategy for gypsum disposal under the No Action Alternative, the existing gypsum stack is projected to reach design capacity by 2031. Closure of the Don Plant would result in cessation of all point source air quality emissions associated with plant operations. Emissions from area and some mobile sources would continue for several decades during evaporation and draindown of the gypsum stacks and other closure activities.

Under the No Action Alternative, the Don Plant is projected to close by 2031. Loss of employment, tax revenues, and purchases of goods and services associated with the Don Plant would result in social and economic impacts in the region. Closure of the Don Plant could also affect operations at the Smoky Canyon Mine and the proposed Dairy Syncline Mine, which supply phosphate ore processed at the Don Plant. Decreased production at these phosphate mines would have similar effects on social and economic conditions in Caribou County, Idaho and in Lincoln County, Wyoming.

3.19 Short-Term Uses Versus Long-Term Productivity

In general, a land exchange does not involve any “short-term uses” of resources; public lands would be permanently and irretrievably placed into private ownership. As such, neither the proposed land exchange itself nor the reasonably foreseeable actions would affect the long-term productivity of the Federal lands. However, reasonably foreseeable actions within the Federal lands, which involve long-term surface- and subsurface-disturbing activities, are likely to permanently affect the long-term productivity of some resources on the Federal lands. The relationship between the reasonably foreseeable actions on Federal and non-Federal lands and the long-term productivity of those lands is discussed in further detail below.

Federal Lands. The long-term productivity of cultural resources, tribal treaty rights and uses, recreation, visual resources, livestock grazing, vegetation, and wildlife habitats on the Federal lands would be

permanently lost through surface and subsurface disturbance, construction, and operation of the reasonably foreseeable cooling ponds and gypsum stack expansions. These impacts would subsequently have long-term but limited adverse impacts on the productivity of wildlife and livestock grazing capacity and on long-term tribal treaty rights, uses, and values within the Federal lands proposed for exchange. The productivity and life of the Simplot Don Plant would be increased as a result of the proposed land exchange. This would result in continued employment, expenditures, taxes, and other long-term impacts on social and economic conditions in the region.

Non-Federal Lands. The non-Federal lands are located in the Pocatello SRMA, directly adjacent to the Blackrock RMZ. The BLM’s multiple-use and sustained yield mission directs the agency to “maximize opportunities for commercial, recreational, and conservation activities. This promotes healthy and productive public lands that create jobs in local communities while supporting traditional land uses such as responsible energy development, timber harvesting, grazing, and recreation, including hunting and fishing” (BLM 2019k). Therefore, BLM acquisition and management of the non-Federal lands, as proposed under the action alternatives, is expected to ensure the long-term productivity of the lands through multiple-resource management and application of the goals, objectives, and management actions in the Pocatello RMP.

3.20 Irreversible and Irretrievable Impacts

This discussion identifies irretrievable or irreversible commitments of resources that would occur if the proposed land exchange were implemented. An irretrievable commitment of resources is one in which the resource or its use is lost for a period of time; e.g., timber production in a proposed road right-of-way within a National Forest. An irreversible commitment of resources is one that cannot be reversed; e.g., the extinction of a species. In some instances, irretrievable actions could be reversed if the land use changes after the completion of the action.

Because a land exchange involves the permanent transfer of land ownership, and all the rights, privileges, and obligations thereof, the proposed land exchange itself is an irretrievable commitment of public resources associated with the Federal lands. In disposing of the Federal lands through the proposed land exchange, the BLM would permanently relinquish all regulatory, management, and administrative responsibility for the Federal lands and their associated biological, physical, mineral, land use, cultural, and socioeconomic resources, and hazardous waste, as described in this chapter. By completing the land exchange, the BLM would irretrievably commit these resources into private ownership and management.

3.21 Unavoidable Adverse Impacts

Unavoidable adverse impacts are impacts that remain following the implementation of mitigation measures, or impacts for which there are no applicable mitigation measures. For this document, unavoidable impacts discussed herein are those resulting from the action alternatives, which propose a land exchange. Compliance with applicable environmental regulations required to implement the reasonably foreseeable actions (described in Chapter 2) would avoid, minimize, or compensate for potential environmental consequences of the reasonably foreseeable actions.

Unavoidable adverse impacts for the land exchange involve the reduction of grazing AUMs within the Trail Creek-2 allotment on the Federal lands. Disposal of the Federal lands will result in unavoidable adverse impacts on recreational opportunities because the lands will be removed from the Pocatello SRMA and associated West Bench RMZ, and the BLM will no longer be able to actively manage these areas for targeted recreational opportunities and outcomes. However, these impacts would be offset by

BLM acquisition of the non-Federal lands, which would be managed within the Pocatello SRMA and would be managed for recreational opportunities similar to adjacent areas within the Pocatello SRMA and Blackrock RMZ. In addition, the reasonably foreseeable construction of cooling ponds and gypsum stack expansions on the Federal lands may damage or result in permanent loss of cultural resources. Because NRHP-eligible sites would be inventoried, recorded, and mitigated through development of an MOA and/or protected through a deed restriction prior to their transfer out of Federal ownership, the adverse impacts resulting from the eventual physical loss of the cultural sites would be minimized.

3.22 Mitigation

Mitigation consists of measures or practices that could reduce or avoid adverse impacts of the action alternatives. Under the Federal Land Policy and Management Act, the BLM has a responsibility to provide for reasonable mitigation for impacts on public lands that are caused by development. Mitigation is often developed and applied through the NEPA process, such as during preparation of an EIS. The Council on Environmental Quality regulations at 40 CFR 1508.20 define mitigation as one or more of the following strategies:

- a) Avoiding the impact altogether by not taking a certain action or parts of an action;
- b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- e) Compensating for the impact by replacing or providing substitute resources or environments.

The land exchange variants proposed under the action alternatives are compensatory in nature because the value of the non-Federal lands that would be conveyed to the BLM are intended to compensate for the monetary and non-monetary values lost by disposing of the Federal lands. In accordance with Instruction Memorandum 2019-018, the BLM may not require additional compensatory mitigation unless such measures are volunteered by the proponent of the action, required by law, or under other specific circumstances (BLM 2019I). Simplot proposed the inclusion of a voluntary mitigation parcel and a voluntary donation parcel as part of the land exchange, which have been incorporated under Alternatives A and B and include:

- 160 acres of private land that would be included as voluntary mitigation (Parcel A), which would be transferred to the BLM and available for exercise of off-reservation treaty rights in the vicinity of other non-Federal lands exchanged in the Blackrock and Caddy Canyon Areas
- 950 acres of private land within the Fort Hall Reservation that would be included as voluntary donation (Parcel B), which Simplot has proposed to offer for donation to the BIA for the benefit of the Shoshone-Bannock Tribes or to the Shoshone-Bannock Tribes directly provided the land exchange is approved and any administrative or judicial appeals have been resolved

As a voluntary mitigation for conveyance of NRHP-eligible Site 10PR979 (SB-02-HL) out of Federal administration under Alternative B, Simplot proposes to contribute \$25,000 to the Shoshone Bannock Tribes' Language Program.

In accordance with BLM Handbook H-1790-1 (BLM 2008), these voluntary actions are considered design features rather than mitigation because they have been incorporated as components of the alternatives. The effects of including these parcels in the land exchange were described in the resource-specific analyses of direct, indirect, and cumulative effects throughout this chapter.

The reconfiguration of the Federal lands boundary under Alternative B was developed as a mitigation strategy to avoid adverse effects on cultural and tribal resources in the west canyon area on the north side of Howard Mountain. The reconfigured Federal lands boundary is considered a design feature of Alternative B. Its effects were described in the resource-specific analyses of direct, indirect, and cumulative effects throughout this chapter.

Following tribal consultation and NHPA Section 106 Consultation, the BLM will identify and include appropriate mitigation measures in an MOA and/or deed restriction, and in the Record of Decision for the land exchange.

Other mitigation strategies are generally not feasible for a land exchange action because the BLM would no longer have authority to impose or enforce mitigation requirements for future activities on the Federal lands after they are conveyed to Simplot. Therefore, this EIS does not propose mitigation for reasonably foreseeable actions on the Federal lands.

CHAPTER 4. CONSULTATION AND COORDINATION

This chapter documents the BLM’s public involvement, consultation, and coordination efforts during preparation of the draft and final EIS, including involvement by the Tribes; Federal, State, and local government agencies; cooperating agencies; and other parties. This chapter also lists all preparers and reviewers that contributed to the development of the EIS. See Appendix I (*Draft EIS Comments and Responses*) for a description of public outreach and tribal consultation conducted for the Draft EIS, an overview of the process used to index and analyze comment submissions, a summary of key comments, and responses to all substantive comments.

4.1 Scoping

4.1.1 Public (External) Scoping Process

The formal public scoping process began with publication of a Notice of Intent in the *Federal Register* on May 20, 2019 (84 FR 22893). The BLM invited the public to submit comments within the 45-day scoping period from May 20 through July 5, 2019. The Notice of Intent notified the public of the BLM’s intent to prepare an EIS, provided information about the Proposed Action, described the purpose of the scoping process, and identified methods to provide comments.

As part of the scoping process, the BLM hosted meetings for the public and other interested parties to learn about and submit comments on the Blackrock Land Exchange. The BLM advertised the scoping meetings through a news release published on May 20, 2019. The news release gave an overview of the Proposed Action; provided meeting locations, dates, and times; explained the purpose of the scoping meetings; identified methods for making comments; and provided contact information for questions regarding the Blackrock Land Exchange. Additionally, the land exchange background and public scoping information was available on the BLM’s ePlanning website.

The BLM hosted two scoping meetings, held June 12 and 13, 2019 (Table 4-1). The scoping meetings gave agencies, organizations, the public, and other interested parties an opportunity to learn and ask questions about the Blackrock Land Exchange and to share issues and concerns with the BLM. The BLM used an open house meeting format to encourage open and informal dialog between the public and agency representatives and allow attendees to learn about the Blackrock Land Exchange at their own pace. Representatives from the BLM included the BLM project manager and members of the BLM interdisciplinary team from the Pocatello Field Office.

Table 4-1. Scoping Meeting Locations

Date and Time	Location	Attendees
June 12, 2019 4:00 p.m.–6:00 p.m.	Fort Hall Hotel and Event Center 777 Bannock Trail Fort Hall, ID 83203	21
June 13, 2019 5:00 p.m.–7:00 p.m.	Bureau of Land Management – Pocatello Field Office 4350 Cliffs Drive Pocatello, ID 83204	9

The BLM received 26 unique comment documents, including one “master” form letter. Of the 26 comment documents submitted, 23 were received via CARA, the BLM’s online comment analysis platform; one scoping meeting form was submitted via standard mail after the scoping meetings; and

two comment documents were received via email. The master form letter was received via email. The BLM's analysis of the 26 comment document submissions resulted in the identification of 334 unique scoping comments.

4.1.2 Agency (Internal) Scoping Process

The BLM also conducted internal agency scoping for this EIS. On March 11, 2019, the BLM interdisciplinary team and EIS contractor staff held a meeting at the BLM Pocatello Field Office to solicit input on potential issues to be considered in the EIS. Following this meeting, the BLM prepared an ID Team Checklist to document the results of the internal scoping process. The ID Team Checklist identifies those resources that are present and should be analyzed in the EIS, resources that are present and not analyzed, and resources that are not present, and supporting rationale for each determination. Refer to Appendix D (*BLM Interdisciplinary Team Checklist*) for additional information.

4.2 Cooperating Agencies

The BLM invited a variety of Federal, State, and local agencies and the Shoshone-Bannock Tribes to participate in the Blackrock Land Exchange EIS process as cooperating agencies because they provided special expertise or jurisdictional authority relevant to the land exchange. The BLM invited the following entities to participate as cooperating agencies, as defined by 40 CFR 1508.5:

- Idaho Fish and Game Department (IDFG)
- Idaho Department of Environmental Quality (IDEQ)
- Idaho Governor's Office of Energy and Mineral Resources (OEMR)
- U.S. Environmental Protection Agency (EPA)
- Bureau of Indian Affairs (BIA)
- Shoshone-Bannock Tribes
- City of American Falls
- City of Chubbuck
- City of Pocatello

Four of these entities agreed to participate as cooperating agencies:

- Idaho Department of Environmental Quality (IDEQ)
- Idaho Governor's Office of Energy and Mineral Resources (OEMR)
- U.S. Environmental Protection Agency (EPA)
- Bureau of Indian Affairs (BIA)

During the course of the EIS process, the BLM hosted biweekly cooperating agency meetings to provide updates on the land exchange and to solicit input from cooperating agencies. In addition, the BLM provided cooperating agencies an opportunity to review and comment on preliminary versions of the draft and final EIS. Additional meetings were held with cooperating agencies to provide updates on the EIS process or to discuss specific topics as needed.

4.3 Tribal Consultation and National Historic Preservation Act

Section 106 Consultation

Federal agencies are required to consult with American Indian tribes as part of the Advisory Council on Historic Preservation regulations, Protection of Historic Properties (36 CFR 800), implementing Section 106 of the NHPA. Accordingly, the NHPA outlines when Federal agencies must consult with tribes and the issues and other factors this consultation must address. Pursuant to Executive Order 13175, *Consultation and Coordination With Indian Tribal Governments*, executive departments and agencies are charged with engaging in regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications and are responsible for strengthening the government-to-government relationship between the United States and Indian tribes. Federal agencies acknowledge the Federal trust responsibility arising from treaties, statutes, executive orders, and the historical relations between the U.S. and American Indian tribes. The Federal Government has a unique trust relationship with federally recognized American Indian tribes, including the Shoshone-Bannock Tribes. Tribal consultation for the Blackrock Land Exchange has been undertaken on a government-to-government basis between the United States and the Shoshone-Bannock Tribes.

During the preparation of the 2007 Blackrock Land Exchange EA, the BLM consulted and coordinated with various groups and entities, including the Shoshone-Bannock Tribes. BLM staff attended various meetings with the Shoshone-Bannock Tribes' Environmental Staff, often to provide the Tribes updates on the land exchange proposal, answer questions from the Tribes, and address concerns. On November 22, 2004, the Idaho SHPO sent a letter to Richard Hill (archaeologist from the BLM Upper Snake Field Office), stating that because there would be adverse impacts on two NRHP-eligible properties, an MOA was required. Further testing occurred at one of those properties before the MOA was finalized and it was determined that the site was ineligible. The *Memorandum of Agreement Between the Bureau of Land Management, Pocatello Field Office and the Idaho SHPO for the Land Exchange between the J.R. Simplot Corporation and the Pocatello Field Office, Idaho Falls District Bureau of Land Management* was issued in October 2009, and included one NRHP-eligible property—Site 10PR666. The Tribes were willing to work with the BLM staff to implement mitigation measures identified in the MOA, but they chose not to sign the document because they did not support the exchange.

In February 2019, the BLM sent the Shoshone-Bannock Tribes a letter with a draft Tribal Consultation Plan. The Pocatello Field Office and tribal staff engaged in a staff-to-staff meeting on March 12, 2019. The Pocatello Field Office and tribal staff then had a formal government-to-government consultation on March 27, 2019. In April 2019, the BLM sent letters re-initiating consultation under Section 106 of the NHPA with both the Tribes and the Idaho SHPO. This letter presented the overview and background of the land exchange, the status of government-to-government consultations to date, and next steps.

The BLM hosted site visits with tribal cultural staff on July 24, 2019, and August 22, 2019. Another letter was sent to the SHPO and the Shoshone-Bannock Tribes on December 3, 2019, describing the results of the latest Class III cultural resources inventory. Extending the existing MOA was no longer an option with additional information obtained from cultural resource inventories conducted for Alternative B; it was determined that the BLM would develop a new MOA to govern the resolution of adverse effects on historic properties on the Federal lands recommended as eligible for the NRHP and/or develop a deed restriction to protect the NRHP-eligible sites.

On December 13, 2019, the BLM mailed a letter and electronic copy of the Draft EIS to the Tribes. On January 9, 2020, the BLM facilitated a government-to-government meeting with the Fort Hall Business Council. The BLM received a Determination of Significance and Effect Record from the SHPO on January 14, 2020, then held a call with the SHPO to discuss the MOA on January 21, 2020. On February 7, 2020,

and on March 2, 2020, the BLM met with Shoshone-Bannock Tribes cultural staff to discuss the development of the MOA for NRHP-eligible cultural Site 10PR979 (SB-02-HL) present within the Federal lands proposed for exchange. On March 10, 2020, the BLM again met with the Shoshone-Bannock Tribes cultural staff to further discuss development of the MOA and discuss the option to protect the site through a deed restriction. On April 27, 2020, the BLM held a government-to-government meeting with the Shoshone-Bannock Tribes Business Council to further discuss the protection of the site through the deed restriction.

4.4 Endangered Species Act, Section 7 Consultation

The ESA directs all Federal agencies to work to conserve endangered and threatened species and to use their authorities to further the purposes of the ESA. Section 7 of the ESA, called “Interagency Cooperation,” is the mechanism by which Federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species. Under Section 7, Federal agencies must consult with the FWS when any action that the lead agency carries out, funds, or authorizes (such as through a permit) *may affect* a listed endangered or threatened species.

To identify species listed under the ESA with the potential to occur within the analysis area, the FWS Information for Planning and Consultation System was accessed on September 5, 2019 (FWS 2019). The Information for Planning and Consultation System query for the Federal lands, non-Federal lands, voluntary mitigation Parcel A, and voluntary mitigation Parcel B did not identify any occurring, potentially occurring, or critical habitat for ESA-listed threatened or endangered species within U.S. Geological Survey 7.5-minute topographical quadrangles that intersect the analysis area. As a result, the proposed land exchange is not likely to affect any ESA-listed species and formal Section 7 consultation is not required.

4.5 List of Preparers and Reviewers

The BLM Pocatello Field Office was the lead Federal agency responsible for preparing the EIS. Table 4-2 identifies key BLM staff involved in preparation of the EIS. Preparation of the EIS was also supported by the cooperating and participating agencies identified in Section 4.2. Participating agencies have the opportunity to comment during the development of the document to ensure that their environmental issues of concern are addressed (23 U.S.C. 139(d)). Table 4-3 lists cooperating agency staff involved in preparation of the EIS. Table 4-4 lists the contractor staff involved in preparation and review of the EIS and associated technical reports.

Table 4-2. Bureau of Land Management Staff Involved in Preparation of the Blackrock Land Exchange EIS

Name	Project Role
Bryce Anderson	Project Manager
Melissa Warren	Field Manager
Blaine Newman	Asst. Field Manager
Danny Miller	Realty Specialist
Amy Lapp	Archaeologist
David Price	Biologist
Ryan Beatty	Fisheries Biologist
Karen Kraus	NRS, Special Status Plants
Jacob Martin	Rangeland Management Specialist

Name	Project Role
Chuck Patterson	Outdoor Recreation Planner
Dianna Mecham	FOIA POC
Ben Swaner	Idaho Falls District Planning and Environmental Coordinator

Table 4-3. Cooperating Agency Staff Involved in Preparation of the Blackrock Land Exchange EIS

Name	Agency
Erik Peterson	EPA
Lynne Hood	EPA
Kevin Schanilec	EPA
Lee Thomas	EPA
Jonathan Williams	EPA
John Chatburn	OEMR
George Lynch	OEMR
Marde Mensinger	OEMR
Marissa Warren	OEMR
Bruce Olenick	IDEQ
Douglas Tanner	IDEQ
Margaretha English	IDEQ
Melissa Gibbs	IDEQ
Becky Johnson	IDFG
Michael Christy	BIA
Sarah Jack	BIA
Preston Smith	BIA

Table 4-4. Contractor Staff Involved in Preparation of the Blackrock Land Exchange EIS

Name	Project Role
ICF (Lead NEPA Contractor)	
John Priecko	Project Manager
Dan Nally	Deputy Project Manager
Jeff Gutierrez	Project Coordinator
Will Ericson	Administrative Record and Project Support
Jenna Wheaton	Comment Analysis
Melissa Johnson	GIS
Saadia Byram	Technical Editing and Publications
Ed Carr	Air Quality
David Ernst	Air Quality
David Johnson	Biological Resources
Ralph Grismala	Geotechnical Stability, Hazardous Materials, Water Resources
James Rice	Water Resources
Claire Munaretto	Socioeconomics and Environmental Justice
Will Cooper	Socioeconomics and Environmental Justice

Name	Project Role
<i>Logan Simpson</i>	
Jesse Adams	Cultural Resources
Jessica Dougherty	Cultural Resources
<i>Paleo Solutions</i>	
Paul Murphey	Paleontological Resources
Kate Zstathopoulos	Paleontological Resources
<i>Galileo Project, LLC</i>	
Grace Ellis	Project Manager
Jennifer Lanthier	Project Coordinator